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CAN REASON INFLUENCE CONDUCT?[1]

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THE title of this paper, which may seem to many to mis-state the real question, is suggested by the view, commonly asserted and as commonly denied, that there is a natural cleavage in human nature between reason, acting through will, on the one hand, and passion, acting through the desires, on the other. It is convenient here, as elsewhere in ethics, to approach the main problem through popular conceptions; but here, as elsewhere, the popular formulation of the problem may be transformed as we examine it. The purist may, however, if he wishes, place the offending title in the neutralising isolation of inverted commas.

Plato, in Book IV of the *Republic,* states the respectable and established position when, discussing the moral struggle, he asks: "Must we not say that there is that in their soul which orders them to drink, and there is that which hinders them from drinking, the latter being *distinct from, and master of,* the former?"; and concludes that "these are *twain*". Aristotle (Ethics, 1, 13, 9) agrees: "One part of the soul is irrational, and the other possesses reason." The Greek tradition, however, did admit that desire can, and should, follow reason. It remained for Kant, with his inflexible East Prussian pietism, to complete the bifurcation; and he did it so thoroughly as to make rational action independent of desire, and to deny to desire even the possibility of being rational. In addition to its philosophical prestige, this view, in one or another of its forms, has the support of language,

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descriptive convenience, and popular religion; and it may be described as the orthodox view.

On the other hand, it has been maintained by an irreverent minority, now, apparently, on its way to becoming a majority, that the only active force in human nature is desire: that reason, being concerned only with the relation between facts, cannot command desire, but can only supply it with information. It is in this sense that Hume observed that "reason is, and ought only to be, the slave of the passions"; a dictum now supported by most psychologists. A conspicuous example is McDougall in his "Introduction to Social Psychology". "The instinctive impulses", he says, "determine the ends of all activities and supply the driving power by which all activities are sustained; and all the complex intellectual apparatus of the most highly developed mind is but a means towards these ends." This may be called the heretical and disrespectable view, for its adherents, even if in a majority, would be unhappy not to be credited with heresy and disrespectability.

Each of these two directly conflicting views rests on the same assumption. In the one case reason is the master, in the other the servant; but in both cases they represent distinct principles in human nature. They involve, in fact, a faculty psychology.

Now a faculty psychology, when called by that name, is considered outmoded; and while modern psychologists will admit that it may be charged against pre-scientific investigators such as Plato, Aristotle, and Kant, they will resent its imputation to themselves. But they have sometimes failed to detect its most recent alias, under which it flourishes exceedingly, with their own seal and sanction. I refer to the distinction between cognition, feeling, and conation. Any such division separates off the process of knowing from the rest of human activity. It is of no avail, after they have been separated, to say, as is sometimes done, that they are inseparable. This merely means that they are always found together, which is quite consistent with their existence as separate principles.

According to the orthodox view, reason controls action either by substituting rational for desiring motives, or by organising desire under the sway of rational insight. It either moves directly to action, or directs action initiated by desire. But, it is urged, it can do neither of these things if it is nothing but itself. Reason, by itself, is purely cognitive: it can only show what is the case; and when it has done its work the desire called out by the clarified situation will take charge. Thus reason cannot control desire at all. The classical statement of the difficulty is that of Hume (*Treatise of Human Nature,* Book II, Part iii, Section 3): "When the objects themselves do not affect us, their connection can never give them any influence; and it is plain that, as reason is nothing but the discovery of this connection, it cannot be by its means that objects are able to affect us."

To this argument there is no reply. Once allow that reason is an independent cognitive faculty, and it is impossible to account for its influence on action. The most it can do is to explore possibilities and to prepare the way: and the drive which sustains it is even so the drive of desire. If the faculty view of reason holds, even though it may be intended in an honorific sense, Hume's conclusion is inevitable.

The implications of Hume's theory are sufficiently far-reaching. It means that there is, and can be, no critical control of desire. It means that integration of character is brought about by the play of desires among themselves, their mutual conflicts and adjustments being regulated by nothing more apposite than the laws of association or the empirical pressure of pleasure and pain. It means, in Hobbes's phrase, that "will is the last appetite in deliberating". It means that there is no difference between a conflict of desires and a moral struggle. It means that there can be no deliberate determination of ends: that a momentous decision on a point of principle is nothing more than a balance of mechanical forces. All this may seem to some to be perfectly satisfactory: and they will not be impelled to inquire further. Even they, indeed, ought logically to inquire whether the theory which necessitates it is true: for if it is not, they will have to find specific empirical reasons for holding it. There is, however, one good reason for doubting it; and that is, that if it is true it makes no difference to mental processes whether the subject is aware of them or not. This I believe to be false, for reasons which will emerge later. Anyone so situated will return to re-examine the assumptions which lead to the unacceptable conclusion.

The crucial point of the theory of faculties is that the soul (a convenient abbreviation, even for sceptics) is partitioned into desire, reason, and perhaps other aspects which do not here concern us, in such a way that there is no overlap. If there were an overlap, if a reasoning process were also a desiring process, then it would be capable of moving to action.

A reference to Greek philosophy will help us here. It is well known that Plato thought of philosophy as a kind of desiring. The philosopher is the "*lover* of wisdom", and Love is the child of Power by Poverty: he is "fearless, vehement, and strong", but he is "ever the companion of want". Plato, in fact, refuses to separate knowing from wanting to know: a view too commonly mistaken for poetic embroidery by abstract epistemologists of a later period. But it is quite obviously true. Every knowing is a kind of striving. Though all desiring may not be knowing, all knowing is certainly desiring.

The underlying assumption is that there are ascending levels of complexity in creation, each being distinguished by a new and unique kind of behaviour. It is implicit in Plato's conviction that it is the function of man to reason, because reasoning is the thing which he alone can do. But it is made quite explicit by Aristotle, who distinguishes living creatures in precisely this way. Plants merely grow: animals grow *and* feel: men grow *and* feel *and* think. Thinking creatures are also feeling creatures; and it is on their feeling that their thinking is founded. This surely means that the more primitive activity of feeling always accompanies the more advanced activity of thinking; and in the face of this it is hardly consistent to make of reason an independently functioning "part" of the soul.

But to return to Plato. As Mr. Joseph has recently pointed out, desire plays a double part in Plato's psychology. It is both a "faculty", standing in juxtaposition with the faculties of "spirit" and reason, and also a feature of each of their activities taken separately. If pressed, this element in Plato's psychology wrecks the separatism of his formal theory. The proper classification would be, not desire, spirit, and reason, but desire, desire-spirit, and desire-spirit-reason. As Mr. Joseph says: "Each of the three εἴδη in the soul is a principle of desire, and makes a man capable of a different kind of interest; but the spirited and the rational have other functions as well." Thus it is that "each may gather its own pleasures, the best and truest of which it is capable".

We have tried to show, by reference to Plato, that the theory of reason as a faculty breaks down in the attempt to apply it, and that the power reason has over desire is exercised solely by means of its desiring quality. The question which Hume thought he had settled thus opens up again, for his argument holds only if reason is taken to be purely cognitive. But reason as a desiring, and therefore as a motive, force cannot forthwith reoccupy its old exalted position. The claim made for it (by Plato and by Butler, for example) is that, by the very nature of man, it holds a special and superior place in the economy of human life. Our problem is whether that place, which cannot belong to it as a "faculty", can be vindicated for it as an unique species of desiring activity.

There are three preliminary points which are essential to further discussion. The first is that desire, and not impulse, is the right designation for the primary human activities. Impulse in human beings is always impulse *towards*, and that is another way of saying desire. It is elicited not simply by the impact of the external world, but by an apprehension of the external world. As apprehension may broaden out into reasoning, and impact cannot, the distinction is likely to be important for our argument.

The second concerns the contention that reason cannot influence desire, because the whole cannot influence its parts. The argument would hold on two assumptions: first, that reason is an underlying entity, for then the question, How can it do anything if it is not one thing among others?, is unanswerable; and, second, that it is totally transcendent, for then the question, How can a connection be established?, is equally unanswerable. If, however, it can be shown that reason is one thing among others, though unique in virtue of its special character, and also that it shares in the driving quality of desire, though it is not simply desire, then objections based on a pluralist logic may be circumvented.

Thirdly, it may be objected that in continuing to speak of "reason" instead of using a more pluralistic term such as "acts of reasoning", we are perpetuating the faculty tradition which we have disowned. That tradition, it will be said, does not consist simply of the affirmation that reason is wholly distinct from desire, though that is one of its many indefensible features. If we are really to deny it, we must stop talking about "reason" altogether. There is no "reason": there are only reasonings.

There is certainly force in this objection: but it hardly affects the argument. It is possible that in this paper the older term may be used for convenience, to describe the common quality of the acts or events in question: but there is certainly no intention of suggesting that reason is a thing. There is, however, this much to be said for a collective noun: that mental events of the reasoning, as of any other kind, are continuous with and grow upon one another, so as to build up a reasoning type of character. And what we would especially urge is that mental events of the reasoning kind are genuinely cumulative, and, therefore, to be distinguished from mental events which are merely repetitive, such as the desire to eat or to clean one's teeth. As they present us with the possibility of a real advance, involving but transcending conservation, they are bound, from their very nature, to play a preponderating part in the organisation of life.

Resuming the main trend of the argument, we may begin by noting the close relation between understanding and control. In the material world, if we wish to exercise control, the first thing we have to do is to understand. But, in learning to understand the material world, we do not at the same time come to criticise our wants. Our wants are taken for granted, and reason tells us how to satisfy them. This is precisely the situation envisaged by Hume, and his description of it is undoubtedly true. The obvious instance is the application of science to production. If we want armaments, science will give us better armaments. If we want sheep per acre, science will give us more sheep per acre. But science does not tell us whether sheep or armaments are to be preferred. That depends on the previous direction of the desires.

But, in practice, we try to understand, not only things, but ourselves. Now if the result of understanding is the capacity to control, understanding of ourselves should give us the power to control ourselves. In such a case desires themselves are submitted to criticism. Reasoning is concerned with direction as well as with efficiency.

But if, by understanding, we may come to control, it is none the less true that we must not merely understand, but experience the *desire* to control. This desire is an eminent fact of experience. It first emerges as a confused effort to overcome the discomfort of mental conflict. We are constantly wanting things which are incompatible, and the stress of division drives us to some attempt at management. We may split life into provinces and oscillate. We may drift one way rather than the other and leave a grudge behind us. We may summon up all our reserves for a momentous and wholehearted choice. Or we may try to find a way of combining the conflicting ends in a perfect integration. Some of these policies are more sensible than others; but each illustrates in its own way a desire to be done with self-division.

The fundamental fact in the growth of character is this nisus towards unity; even the sulkiest of adaptations is a move in this direction.

But it is only in conjunction with intelligence that the desire to avert conflict develops into the desire for control. Oscillation and drifting, for example, are not control at all. But oscillation and drifting arise from an unwillingness to analyse situations, presumably based on a reluctance to sacrifice. Once these emotional inhibitions are overcome, intelligence shows that the situation can only be solved by being taken hold of. It will be observed that intelligence, here as before, is a means to an end, but the end is the manipulation of desires: and in this sense, at least, intelligence has power over desires.

The perception that situations must be faced and not evaded, while a rational perception as far as it goes, is not enough to tell us *how* we are to face them. A good deal of courage is often spoilt by stupidity in detail. We must understand not only the necessity for control, but also the way in which that which we want to control behaves. We must understand the true nature of our own desires: otherwise they will elude us. The extreme instance of this truth is supplied by the psycho-analyst, whose object is to bring the repressed desire to the surface of consciousness for reintegration. But anyone can testify from his own experience to the salutary effect of unmasking his motives. Knowing what we are, we can estimate the forces with which we have to deal. It should be added that, to understand ourselves, we must also understand at each moment our relation to the world we live in. What we have to control is a whole situation, including both ourselves and a portion of the external world; and without this outward reference there can be no reliable self-knowledge.

At this point it may be suggested that all this elaborate understanding is uncommon, and perhaps, owing to the ubiquity of minor repressions, only attainable with the aid of a psycho-analyst; whereas the majority of people are, for working purposes, whole-minded, including many who do not in the least understand their own desires. It may even be argued that those who try to rationalise their lives by consistent adherence to a planned order are more likely to suffer from repressions than the blithely unsophisticated. Both these contentions must be admitted; but they do not affect the argument. In the first place a planned regime is not necessarily intelligent; it is only too easy to be self-conscious and at the same time not intelligent. Much self-consciousness is of the nature of brooding rather than of curiosity, and thus fails, even in the case of otherwise intelligent people, to result in superior insight. Moreover, a regime planned without reference to changes in the external world is a sure way to maladjustment. In the second place, it is perfectly true that many people make the intelligent reaction, i.e., the reaction which a sound analysis would recommend, without making any analysis whatever, and that they come off better than those whose analysis is conscientious but betrayed into wrong-headedness by their inhibitions. Considering how little we do know about ourselves, it is well that the desire for control should operate successfully without the aid of deliberation. But without knowledge there is no certainty, and no way of regaining the track if one has once lost it. Thus the traffic at a busy and uncontrolled crossing at a rush hour may get through, despite the worst intentions, without an accident. Indeed (to carry the simile further), it would fare better so than if decoyed into carelessness by an imposing dummy policeman, if we may thus describe our safety-ridden and fundamentally dangerous system of taboos. But a genuine and discriminating policeman is the best solution of all.

We conclude, then, that there is a desire for adjustment, and that it is most surely fulfilled through the understanding of desires and of their relation to the external world. But, it will be said, what "rules" the desires in this instance is still another desire, and that desire is not even the desire for knowledge. The control of desire through intelligence is based on the desire to overcome conflict. It accounts for, and demands, a drive towards unity, and the other desires do not, and, therefore, is unique among desires; but it brings us no nearer to the theory of the supremacy of reason. Reason is still no more than the indispensable tool.

That reason may be brought to bear on the desires in the interest of the desire for unity, and that this is no small part of its function in the organisation of life, may now be taken as certain. But two points will repay investigation. In the first place, the unique position of a desire which selects among desires is surely in itself significant, and leads to the conception of *rational desiring.* In the second place, reason does not merely contribute knowledge for the use of desire: by the mere fact that it exists it alters the character of desire. The second point is perhaps the more fundamental; but we may begin by considering the first.

As long as a desire is for something in the external world it is necessarily for something in particular. The result of desiring particular things, especially in a stable and well-organised environment, may well be coherent all-round satisfaction; but that will be because the particulars concerned are compatible or harmonious with each other. This kind of spontaneous integration, when combined with natural grace and intelligence, is extremely attractive; but in any complex environment it is out of the question. And, once disturbed, it can only be reconstituted by taking a whole view of desires and their environment. The whole does not come into consciousness as long as the aspects fall naturally together; but when there is conflict, it begins to emerge explicitly as an object of desire. A desire for adjustment among desires is a desire for a something in particular which is also not particular, but a general state of affairs, embracing the desires for the merely particular. It is both universal and one among others.

This view suggests the now almost outlawed Hegelian conception of unity in difference, in which I confess to seeing an important element of truth. Still, to avoid a scandal, I will point out where it differs from the view here affirmed. The older view was that there is a whole of diverse parts or aspects. Its metaphysical background, despite idealist disguises, was that of "spiritual substance". The view here affirmed is that from a single growing psycho-physical organism are elicited different desires, which at times run off distractingly in opposing directions; and that this whole situation gives rise to a secondary, but in the end dominating, desire for critical and coherent living. The underlying conception is not substance, but function: and the integrating influence is not a "whole", but a single dominating factor.

Perhaps, on the principle that the large letters are easier to read than the small, we may hazard a political analogy. According to the traditional view, the community is an organism of which the State is the head. But there is an alternative view, monistic, perhaps, in the end, but firmly rooted in pluralism, to the effect that the State, like other associations, originates in a specific purpose, which nevertheless presupposes other purposes; as Locke, alone among the classical authorities, had the insight to observe. This particular purpose, by its very particularity, is universal, while other particular purposes, by reason of their different particularity, are restricted in scope as well as in their intention. Consequently the function of the State is not to absorb, but to supervise. Unity devolves, not from a whole, but from a one-among-others. This analogy with the status of the unifying desire in the mind would appear to be sufficiently exact; and perhaps it is not wholly fanciful, though certainly outside the scope of this paper, to hint at an universal structural principle, and to suggest that, making allowances for the disparity of finite and infinite, the relation of God to His creatures might be conceived in a similar manner.

Returning, however, to our own psychological field, we may inquire at once whether the unifying desire may not in some sense be described as rational. It is not primarily a desire to understand; if by "rational" we mean either contemplative or analytic, the addition must certainly be denied to it. But, though not in this strict sense a "rational" desire, it is none the less a desire for a "rational" state of affairs. It has already been argued that reason, as explicit contemplation or analysis, is a form of striving, and, therefore, a desire. We now have to show that desires other than the intellectual may possess rational characteristics.

The mark of a good theory is coherence between its component elements, and the coherence of these elements, both singly and collectively, with the external world. Now, except for the absence of any explicit recognition of its end, exactly the same can be said of a nisus towards unity. It is primarily a movement towards coherence among the desires themselves; but that movement demands on occasions the reconstitution of those which will not cohere; and while the attempt to reconstitute them is sometimes made on an unreal and arbitrary basis, the only basis which is of any service is the re-establishment of their connection with the real world. It would appear that in this vital structural matter desire may show precisely the same character as reason shows on the level of explicit consciousness. Yet it would be untrue to say that it only displays this character when in conjunction with a conscious process of reasoning. In the psychically healthy person it is diffused in the form of a general attitude, which is brought to bear without effort or deliberation. As we have seen, it demands a recognition (though even this need not be the fruit of conscious analysis) of the facts of the case, and of the implications of various methods of handling them: that is to say, it operates efficiently only with the aid of reason. But it is not in itself a reasoning activity.

In order to maintain that there are in human beings activities which may legitimately be called rational, and are at the same time not the products of reasoning, it is not necessary to see a rational order in the world as a whole. If there were any indication of such an order on other grounds, the unreasoning rationality of the nisus towards integrity would be a valuable empirical confirmation: but for us it is merely an empirical hypothesis devised to account for a specific set of facts. Within these limits, it shows how conduct not explicitly controlled by reason can yet be rational, and how rational conduct, in the explicit sense, rests on the basis of this subordinate rationality. Thus, even if reason appears to be a means for the fuller satisfaction of the nisus, the significant quality of the nisus forbids us to say that reason is here functioning in the service of a non-rational desire.

The upshot of this discussion may be summarised as follows: (1) Every desire is purposive: that is to say, it is an impulse towards, not an impulse pure and simple; and desire, not impulse, is the basic concept in the psychology of action. (2) Every desire may be grounded more or less intelligently, that is to say, on a greater or lesser understanding of the facts. (3) Arising from the uneasiness caused by mental conflict and the enhancement caused by successful integration, there is a central desire which we have described as the nisus towards unity. (4) This central desire also depends for its surer guidance on the service of intelligence. (5) By its very nature it modifies the operation of desires, and the intelligence which serves it proceeds through the understanding of desires. (6) It may operate without any conscious intellectual guidance, but unless it relies on understanding it may become arbitrary and even pathological. (7) But it shares intrinsically in the general character of reason, and there is at least some sense in which it may be called rational.

This conclusion, however, offers no escape from the view that reason in its explicit form is merely a means towards an end. Reason may survey desires, but only in the interests of another desire, even though it be a rational desire. If further analysis confirms this view, we shall have to admit that while reason can influence conduct in the interests of another desire, it can have no originating power whatever.

Even so, however, there would be no need to conclude, as is frequently done, that there can be no critical review of desires, and consequently no choice among them. The central desire is not on the same plane as the others, and intelligence, acting in its interest, is acting in the interests of a whole though loosely coordinated and only inchoate system. Intelligence, in serving one desire, surveys all. This is the answer to the contention of Mr. Passmore, in his recent article on "Reason and Inclination" in THE AUSTRALASIAN JOURNAL OF PSYCHOLOGY AND PHILOSOPHY, that there can be no impartial reason. It is true, as he says, that "if reason is to oppose inclination, this implies that reason rejects the objects of inclination and sets up against them its own objects". But he goes on to say that reason is, therefore, incapable of impartiality. Now it is true that reason cannot be impartial between itself and desires rooted in partiality. But its own desire is precisely for impartiality; and to be impartial between partiality and impartiality is not to be impartial at all. The regress comes to a natural end at this point; reason has a special end, and that end is not to be special. It cannot judge between itself and anything else, but it can judge between all other things. Hence the possibility in principle of what I suspect Mr. Passmore wishes to deny, an objective view of fundamental desires, and thus of the principles of politics.

Thus the sense in which reason serves desire does not exclude its objectivity in respect of other desires, even though such objectivity, owing to emotional resistance, is not easy to secure. And this is the issue which is of most practical importance. From the practical point of view, all that is commonly meant by saying that "reason is the slave of the passions" may be refuted even if we admit that it is the "slave" of an unique particular passion for wholeness or adjustment. But even so the relation between reasoning and desiring must be further explored: for the account we have so far given, namely, that reasoning is concerned with the means of fulfilling desires through closer exploration of the field of action, is in one respect suspicious, and in another false to experience. It is suspicious because it is compatible with the conception of reason as mere cognition which we have already found to be defective. Suspicion is not, of course, an adequate reason for rejection, but it is a very good reason for reconsideration: and it may prove that if reason is a desiring activity it cannot be without influence on action. Our account, however, is false to experience in that it does not observe closely enough what happens when we reason. It is to this latter point that we now turn.

When, in the midst of a busy executive life, we find time genuinely to think—not merely to plan, but to meditate—there is a change in our whole emotional attitude. It is not easy to describe: perhaps it is best called an onset of disinterestedness. In action, and in the circumscribed planning which leads to action, and is dominated by action, we are restless and preoccupied and sometimes anxious. Our movements are quick and eager, and we respond readily to external stimulus. When we come to think, we become quiet and often motionless, relaxing our muscles and responding opaquely to the external world, even if we do not succeed, by "sporting our oak", in excluding it altogether. On the other hand, the internal stimulus operates quickly and surely. We are in a state of suspension, in which other emotional experiences are inhibited, and in which, even if the object of thought is quite impersonal—astronomical physics, for example, or symbolic logic—we feel the slow warmth of an inner poise and mastery. It is not a mood of mere excitement, for it is attended with a strong sense of honour. It is not when we are thinking well, but when we are thinking badly, and against time and inclination, that we slur difficulties, or shrink from the tender agony of intellectual parturition. We do not care what happens in consequence: that belongs to the world outside, to which in due course we shall return, but which does not enter into our present mood. The only thing that matters is that we shall think truly.

Now we have already seen that one important way in which thinking may make a difference to our desires is that it may serve the desire for the adjustment of desires by understanding their nature, and thus showing how the adjustment may be most effectively carried out. This is the effect of self-knowledge on those who desire self-control. But self-knowledge, like any other form of knowledge, operates directly as well as indirectly. It is not only a mechanism of control, it is itself a control. The mere fact that we are thinking makes a difference to our emotions. It produces immediately something of the result that we hope to attain by means of it. Thinking itself, and not merely such conclusions about desires as may be reached by thinking, reduces the desires to poise and perspective. The conditions we contemplate and strive to produce as an object are actually demonstrated in the subject. It is true that thinking is not continuous, and that high-grade thinking, involving a highly integrated effort of mind and body, is uncommon. But the effect of intellectual strenuousness and honesty is felt through the whole life: vision, like manual skill, is a vital tonic and sister to poise and rectitude. No matter what its conclusions are, thinking itself is a form of conversion.

Now if this is true of thinking in general, it is particularly true of thinking about our own conduct. For, in such a case, the effect of the thinking coincides with the object of the desire which the thinking serves. We start out to understand ourselves in order to organise ourselves, and we find that we organise ourselves in the very act of understanding ourselves. The by-product, by a curious alchemy possible only in the human mind, is identical with the article we set out to manufacture. The satisfaction found by the thinker is precisely the satisfaction which is sought by the man whose needs give rise to the thinking.

But, in order that thinking should perform its integrating part, it need not arise from the desire for integration. Not all thinking begins with a practical problem. There is thinking based on wonder as well as thinking based on practical need. There is thinking which is an independent and spontaneous desire as well as thinking which is set in motion by other desires. And this thinking integrates in a different way from deliberate self-control: a way, indeed, more satisfactory to the original desire for integration, for the obstacles fall away and do not have to be conquered, and there is less division in the soul than when integration is a deliberate end. Indeed, the only real cure for division lies in its dissolution in (not as a result of) an immediate act of understanding. When the whole soul is stretched to the uttermost in the illuminating excitement of intellectual discovery (or, for that matter, in artistic creation or religious ecstasy), the desire for integration passes from prudent avoidance of pain to adventurous excess of joy finding its completion in an activity too much absorbed in the object to be conscious of itself. The philosopher, the *lover* of wisdom, will not seek his mistress as a pedant or a huckster: his passion will not consort with dull deliberation or crafty advantage: it rises above purpose and calculation, and presses on, with a chaste matutinal ardour, into a service which is perfect freedom.

Reason, then, can influence conduct in two senses: it can influence it through what it discovers, paving the way for the control of desire by revealing their relations and their natures; and it can influence it as a process of discovery, in which it gathers into its service many loose and unconsecrated odds and ends of psychical material which, in the tepid idleness of a life without passion, are only too apt to run into mischief. We have now to trace the relation between these two manifestations: and we can then conclude by asking what light our investigation throws on the nature of a self.

We may begin by noting that our whole analysis confirms our original abstract argument. Reason is nothing if not a desire. Even in its practical moments, when it serves other desires, it is still an independent desire: for the moment it is left to its task of concentrating on the tangled situation left at its door by our wants, the original restless desire disappears, and the tranquil inner excitement takes its place. Indeed, the appeasement of the original desire appears to be due at least as much to the bracing tension of good thinking as to the announcement of a solution. But, for all that, there is a persistent superstition that if thinking is desirous it cannot be reliable. It is due to the fundamental assumption that reason is one thing and desire another. (There is a similar superstition in epistemology, that reason is one thing and intuition another.) Reason has been identified with a restricting and repressive force, and it has been taken for granted that desire is inevitably disorderly and disreputable. One is tempted to quote, as a parallel instance, Bernard Shaw's unflattering description, in the stage directions to "The Devil's Disciple", of the inhabitants of Websterbridge, New Hampshire, in 1777, "to whom drink and debauchery are so much more attractive than religion and rectitude, that they conceive goodness merely as self-denial". As the people who find morality dull are fundamentally immoral, so the people who find reason dull are fundamentally stupid, no matter how diligently they may grind out their sapless and pedantic conclusions. The fault lies with the Puritans and the prudentialists, who have eulogised reason and measure, not as the fulfilling of a more lasting desire, but as a makeweight against desires of which they are afraid. The result is a revolt against reason equally based on a complete ignorance of its nature. Actually, it is passionate thinking which preserves its equipoise, and dull conventional thinking, more exposed to extraneous influences, which drifts ineptly into prejudice. It is the high-mettled mountaineer, and not the shambling clodhopper, who preserves his balance on an Alpine razorback.

Now, in this general desiring quality of reason, may we not trace a continuity with the central desire for unity which we found in the midst of the more specialised desires? We have seen that it possesses implicitly what a clarifying intellectual process possesses explicitly, i.e., the character of correlating subjective experiences with each other and the external world. It operates, at first, in an undefined general way, now pressing for a solution of conflict, now pursuing an unimpeded path in the permeation of the whole desiring system. As it develops, it calls into service the understanding which has proved so useful in the manipulation of the external world, and sets it to work on the more delicate and fugitive material of the desires themselves. But, as it turns out, this same understanding is one of its own more advanced developments. It continues in it, and that is why, even in its most menial aspects, it is never quite a mere means to an end. *O matre pulchra filia pulchrior!*

It may be urged that the intellectual passion is uncommon, and that many lives are none the less complete without it. This may at once be admitted. There can be real greatness, wholeness, and simplicity in men of only average intellectual endowment. The saint manifests the same inner concentration in the form of a superior grace and radiance of behaviour, which owes little or nothing to reflection or curiosity. But this means that there are other forms of intense and enthralling activity besides the intellectual. Each expresses an underlying rationality, which pervades even those forms in which it does not become explicit. Plato, in a magnificent lucid interval in the midst of his ravings on censorship, noted the affinity between artistic and moral excellence: "Absence of grace and bad rhythm and bad harmony are sisters to bad words and bad nature, while their opposites are sisters and copies of the opposite, a wise and good nature." Not only does this sentence prompt the unanswerable query, In that case why censor the artist?, but it points to a structural analogy between æsthetic and moral experience, each possessing the rhythm or order appropriate to its material. And further on, Plato argues that one rightly educated in the arts will "welcome reason as one who knows". The fundamental conception is that of "cosmos", or order, the driving force of which is the central integrative desire, but which requires, if the facts will allow of it, a basis in the integration of perspectives in which experience reaches its consummation. That is why the activities of man meet and are concentrated in religion, the one activity which rests on a rapprochement of fact and value.

It may be said, again, that we have been exalting a number of attitudes, including reason, which are in practice by no means what they have been described as being. Morality, so far from being radiant or graceful, is gruff, rigid, and even spiteful: art is sensual or didactic and panders to stock responses: reason is dull and unintuitive, formalising and mechanising all it touches: while religion, so far from being the supreme concentration of life, is an instrument of outworn tradition, a refuge for the coward, rigid, empty, and obscurantist: in short, a corrupt ambassador of death. The answer is that all these things may be true. Nothing is exempt from deterioration, and that which has the greatest potency deteriorates most tragically: as Plato observed of the statesmen of his day, and as is illustrated in the myth of Lucifer, the fallen angel. Reason, like the rest, has its pathology. But, like the rest, it decays when the passion goes out of it: when men are content to live on other men's results, and do not repeat the palpitating activity in themselves. As soon as it ceases to convey the original central desire for the integration of experience, as soon as it becomes a mechanical repetition, it falls back into the semblance of the inanimate, weaving the same formal patterns, but with an "unmindfulness", if I may borrow Hardy's phrase, which, in course of time, ceases even to be "skilled". The decay of all human activities begins with the slackening and somnolescence of desire.

Our last question is that of the "rational self". The conception is often criticised (as by Mr. Passmore in his recent article) on the ground that it is an otiose and fictitious entity invoked, but never displayed, in order to provide an unnecessary background for the desires (or, as writers of this kind are apt to say, impulses), which alone are actually observed to exist. It must be agreed that an entity such as this ought not to be introduced merely on general grounds of logic if there is no evidence of its existence. But it is hoped that our investigation will enable us to use the term without this offending implication, in such a way as to bring out certain aspects of the problem which the critics who deny the conception altogether are compelled to ignore.

In analysing the nisus towards integration, we noted that there is a specific desire for generality, which operates on the other desires by permeation rather than by compulsion or command, and, taking its rise from amongst them, outgrows them, while aligning itself with them as far as they go. This is not an entity lying "behind" the phenomena: it is a remarkable phenomenon among phenomena, and an attempt has been made to suggest the mode of its relations with the others. That its outlines fade into theirs, and that the influence they wield on each other lacks the distinctness of a physical impact is true, but that is due to the nature of the phenomena under discussion. There is a fluidity and mutual penetration about mental events which prevents us from keeping them distinct from each other. There is thus overlapping and continuity, but this is not traceable to any otiose entity. It is part of the nature of a mental event.

In the same way, in dealing with the reasoning attitude in its explicit development, it was indicated that while it may dominate the whole of our desiring nature for the time being, and leave its mark on it permanently, it is not an attitude "underlying" those which it incorporates. An "underlying" attitude, as Mr. Passmore points out, could exercise no influence whatever. It is a perfectly definite form of desire with a perfectly definite object: that of understanding. It may turn out that the object, and consequently the activity, is of central importance; but surely the demand that reason should be "on the same logical level" as desire does not mean that it must be of equal importance with other kinds of desiring. In any interrelation, however loose and empirical, there are key positions: and all that is contended is that reason, in the structure of human experience, is one of them. If Mr. Passmore can agree to the formula, *primus inter pares,* I have no quarrel with him, but he may then have to reconsider his conception of the status of reason. If he cannot, we disagree, but I contend that he is stretching his own formula further than it will legitimately go.

The reason why I suggest that reconsideration may be forced upon him is that the formula, *primus inter pares,* seems to me not to be inconsistent with the theory of a "rational self". If by a "rational self" were meant something fixed, supporting attributes but doing nothing, there would be nothing in our argument to justify it. On our account, the "rational self" is a growth or a tendency rather than a substance. There are in human behaviour a number of desiring activities which *tend* to be welded, certain absorbing and concentrating activities which *tend* to permeate them, a *tendency* to integration, a *tendency* to understanding. The self is, in fact, the ideal limit of activities which implicitly or explicitly display the quality of rationality. But it is always realised up to a point, and the extent of its realisation is the measure of the "influence of reason on conduct". There is always a certain coalescence of activities, a certain strengthening and harmonising of character. But there is always also a certain tension, a certain need to hold on to elements which at the moment are incompatible, a certain diversity and even divergence of response, answering to the chequered and contradictory stimuli crowding in from the external world. The great man, whatever his particular field, is the man who carries the tension and rises above it. Deissmann writes of St. Paul: "The human greatness of St. Paul is revealed by the great polar contradictions observable in his nature. . . St. Paul had room in his personality for opposing principles which would inevitably have shattered a small man. . . They did not shatter St. Paul: they set up in him the high tension which found an outlet in the energy he expended on the great work of his life." So Socrates bestrode the great gulf between mysticism and rationalism.

These examples go to show that what goes nearest to producing a genuine personality is a master passion. This does not exclude balance and equipoise: it produces it. A master passion is precisely the opposite of an obsession. The difference is that one makes life full and vigorous, and the other impoverishes it. The master passion of the philosopher, the conviction that "the unexamined life is not worth living", puts in perspective all his other more random activities.

Socrates, Plato, Spinoza, and Kant, to select almost at random, regarded themselves as dedicated. Their passion for reason "influenced conduct" to the extent of moulding the whole outline of their lives. But even so their selfhood was not free from limitation and contradiction. Their transcendence of their tensions was not universal: it was restricted to times and contexts. The great centralising desires were more insistent in them than in most men: but even so they cannot be described as "wholes". They were rather tendencies towards wholeness, developed to an unusually high pitch.

To sum up: Mr. Passmore's criticism appears to be valid against the conception of the rational self as he represents it, but does not dispose of (and perhaps indeed is not directed against) our alternative conception. Reason, in influencing conduct as we have indicated, is neither a faculty nor a substance. It is a specific desiring factor, diffused or concentrated as the case may be, acting as a nucleus for the integration of desires in general.

This concludes our investigation. Our conclusion is that reason (or, if it be preferred, reasoning processes) does influence conduct, and not simply as one desire influences another, by permeation or conflict, but firstly as an unique instrument of control, secondly as a diffused nisus towards unity of conduct, thirdly as a way of life bringing order into it and concentrating it into a single-minded effort

> To follow knowledge, like a sinking star
> Beyond the utmost bounds of human thought.

The "slave" theory, which holds inevitably if reason is regarded as purely cognitive, finds here no support, for reason is through and through desiring. Nor can it be said that a reasoning desire is no more than one desire amongst others. It possesses an integrative and (what is the same thing) an authoritative character not possessed, for example, by the desire to injure or the desire to drink. To use Plato's words, it can both rule and advise. We have made to the innovators the concessions they deserve; but we adhere to the main lines of the great philosophical tradition.

PHILOSOPHY AND EDUCATION.[1]

By R. Lawson.

The subject proposed to me was 'Philosophy and Education', not *a* Philosophy of Education and not *the* Philosophy of Education. There cannot be *a* philosophy of education or of any of the other departments of knowledge *per se,* and no one of these most offer an antinomy with any of the others. If we merely wish to see *a* philosophy of education or of politics, all we need to do is imitate the Greek soothsayers and eviscerate any one of the existing jarring systems, inspect the splanchna and announce the omens. We should then in a very literal sense get at the heart of various systems each claiming to be not *"a"* but *"the"* philosophy of social and political life and education. But philosophy is ungeographical and unethnical. Its horizon, like our earthly one, pursues us flying, flies when we pursue it—always there, always inapprehensible. Philosophy is an expedition doomed to failure, yet ever to be pursued.

Philosophy seeks a final generalisation and never finds it, education offers its benefits mostly here and now. Education is philosophy in action—or rather it should be—and conversely philosophy is education idealised. Philosophy is an intellectual religion, as religion is an instinctive philosophy. Education was in mediæval times an aspect of religion or religious philosophy in action; today it is politics or class domination in action—except in a few countries. Education was once for the few only, it is now for the many. Philosophy always has been, and apparently always will be for the few only. Nature has settled that. Plato was right in determining the philosopher-kings to be few or but one in the state. The mistake he made was in regarding the chrematistic, or general body of business people and artisans as incapable of higher education. Higher education is quite possible for the majority of men, provided it is adapted to their kind of mentality. But the pursuit of philosophy demands not only a high mentality, or I.Q., as the intelligence testers call it, but it also demands a very specialised type of mentality, one that is not only able, but patient, to sustain a long argument or inquiry in an abstract region above the smoke and stir of this dim spot of war and money and other things material.

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[1] Read before Section J, Australian and New Zealand Association for the Advancement of Science; Auckland, January, 1937.

The devotee of philosophy, if he is to survive, must carry his own oxygen with him into those high altitudes. Yet philosophy could be brought more into touch with education, it could be made palatable to the banausic chrematistes. Philosophy was once *a* way of life, it taught men how to live, how to govern the state, how to educate. Each philosophy, stoic, epicurean, cynic, was *a* way. When Christianity came, it declared itself The *New* Way, or par excellence *The* Way, and ultimately ousted the Stoical Way that was followed by leading Romans from Cicero to Marcus Aurelius. Mediæval thinkers essayed a synthesis, and again philosophy under control of religion indicated the way. But, unfortunately, in our day philosophy has become dehumanised or nationalised and has fallen from its high estate. Modern philosophers, from Hegel onwards, have too often employed an unintelligible style which is mere verbiage concealing the veriest truisms. No one any longer thinks of turning to philosophy for guidance in *the* way or *a* way. What is sadly needed is a great poet or a great synthetic philosopher, a Lucretius or a Thomas Aquinas, who could put forth in terms not too wise or deep for human nature's daily food the truths that philosophy has won. It is a plain fact that both Religion and Philosophy have lost their hold on the classes who formerly were guided by them.

This of course reacts prejudicially upon education. Education, once a guide or even a queen at the head of the human procession, is now a captive in bonds or mere servitor to the regnant dictator or gang. When this happens it is inevitable that philosophical values are lost sight of or derided. Mussolini has declared, "The Fascist conception of the State is all embracing; outside it no human or spiritual values can exist". I marvel how the Church can tolerate that, if it does tolerate it. The President of the Second Moscow University, Pinkevitch, writes: "We do not look upon truth, beauty and goodness as absolute categories or principles, but rather as subject to definition from the point of view of the interests of a given group or society. To us Socialists and Communists the proletariat provides the point of view." Which, being interpreted, means that it cannot be true that nature has made men unequal, because this contradicts Soviet ideology. The Führer of the present Germanic anti-philosophy crusade has taught German students to chant "We think with our blood". The Führer is a misologist despising the pre-Nazi cosmopolitan philosophy as sentimental logomachy. He says in "Mein Kampf" with derision that the bespectacled theorist would always rather die for his doctrine than for his race. Dr. Theodor Wilhelm of Berlin recently expounded the doctrine, thus: "Not mere knowledge, but the ability to decide, the very fact that I make up my mind to do this and not to do that, is the surest path to truth, the most reliable guide to the true nature of things." There we have the naked doctrine—will is truth, and when will collapses, truth collapses. Naturally education is the scullion to this master. For example, Dr. A. Baümler of Berlin, Professor of Philosophy and Political Education (note the title), says: "The era of the unpolitical school, of the school ruled by an abstract dialectic, is over; the era of the political school has begun." Russian literature I know only at second hand, but in German and Italian journals no word of criticism appears; the unanimity of thinkers is remarkable—that is, if silence gives consent.

It is significant that in the Council of Education (Consiglio Superiore dell'Educazione Nazionale) in Italy the name of Gentile no longer appears. This is not surprising, for, although in his idealistic book, "The Reform of Education", there is a decided nationalist note, and though he pledged his allegiance to Fascism, that book culminated in a declaration that Education is spiritual action, that it is therefore freedom and is really philosophy. With these three dicta, education is action of the spirit, is freedom, is philosophy, I wholly agree—that is, of course, education conceived in its purest form. Without freedom neither pure philosophy nor pure education can ever come into being. Professor of Philosophy and Political Education, forsooth! State dictation and indoctrination, indeed all forms of authoritative defining of the goal, are the negation of free activity of the spirit. Gentile was aiming at two incompatibles. His dictum that the good citizen wills only what the state wishes him to will goes back to Hegel and, indirectly I think, to Fichte. Fichte, of course, had the universal view of philosophy. He said that he wished to set up in the hearts of all Germans that kind of love which is directly concerned with the good, simply as such and for its own sake, or what he elsewhere calls pure morality; and still further carrying this to its logical conclusion, he says: "Education to true religion is therefore the final test of the new education." This is analogous to Gentile's conclusion, except that the latter issues in philosophy, the former in religion. Fichte's ultimate goal is—I quote Dewey here—"a universal state as wide as humanity, and a state in which each individual will act freely, without state-secured rights and state-imposed obligations. But before this cosmopolitan and philosophically anarchic condition can be reached, we must pass through a period of the nationalistic closed state". Thus mankind is to be led towards perfection by the state through state-directed education.

From an absolutely supreme state even where it is working towards a universal ethical socialism the descent to state action as we see it today is almost inevitable. If the state is a moral being and at the same time uses compulsion to support morals it destroys freedom. Plato became impaled on the horns of this dilemma. In the *Republic* he rises to a contemplation of the Idea of the Good—which to me is simply the Idea of God—and thence derives all human blessings, arranging his educational scheme to sift out always those specially fitted to govern, to protect, and to discharge all the general offices of mankind, in such a way that by always confining one man to his own best work he will secure justice. But in the *Laws* he so enthrones his state as to make it the final arbiter in imposing its ordinances on the activity of the free spirit, even to persecution for heresy. Aristotle is less ethereal than his master, is more practical, and avoids the antinomy that Plato becomes involved in. He has not to violate any transcendental principles of his own in the measures he draws up for state education. But then we have not his doctrines in full—for either his imagination failed him when writing his *Politics* or else the books on the complete state scheme have been lost. Complete freedom in education would be an anarchic socialism arising from perfect individuals; it is a millennial dream. But complete freedom in philosophical speculation is the very breath of its life. Aristotle, while enthroning the state, does not adore it or make its morality an exception in private or general morality. The ancients, however, had no conception of the State Universal that figures in modern thought, in Fichte, for instance, and in pre-Nazi thought in Germany. Thus in 1919 President Ebert declared at the opening of the National Assembly at Weimar: "We want to establish a State of justice and truthfulness, founded on the equality of all humanity". This is the true philosophico-educational doctrine, the belief in the imperishability of the spirit fashioned into freedom.

The natural outcome of philosophy must be, as it should have been for Hegel, a League of Nations; there can be no national philosophy, although, unfortunately, there is now a national science devoted purely to state problems and deliberately instructed to avoid the disinterested pursuit of scientific truth. At present we see almost everywhere abandonment of the attempt to derive education from a supersensible world either of philosophy or religion. If the warrant for education is to be found in the supersensible world, who is to implement the doctrines? Is it the State? or a Church? Or can there be a new brotherhood, a philosophic brotherhood (something of the sort that Comte depicted) who will undertake the ministry of teaching? This is really the fundamental problem of education, to secure teachers who are filled with the spirit of Philosophy to lead up the practical and rational occupations of men towards the ultimate values that philosophy finds in the universe. I think it would not be impossible for a meeting of philosophers, say a dozen, to draw up a scheme of things agreed upon for general diffusion amongst the non-metaphysical of the world. If there is not a sufficient 'consensus philosophorum' to make this possible, it is time, say some, that philosophy retired from the scene. But it will not retire, it cannot retire. Man must think, and to think is to philosophise. We have as strong an urge to think as to run away or to fear. Knowledge is the child of curiosity. Knowledge is diffused by communication. Communication written or oral is a form of education, but it soon sets itself up as a substitute for or a superior to its original parent, curiosity. In other words, authority is set up, and education in studying the past and conforming to it becomes sterile. But we *must* study the past and transmit its findings to the next generation. There again freedom enters; everything depends upon an active spiritual assault upon the past, not in a vandal spirit, but in a creative spirit. The pure reactionary, if there is one, in *his* Real loses the Ideal: the pure Revolutionary in *his* Ideal loses the Real; the former, as Edouard Spranger says, despises the future which will one day be the present and then the past; the latter despises the past which was once the future. Education must take note of the historic personality of man, and of what spiritual possessions it has acquired, at the same time without quenching the living propulsiveness or creative process in his spirit.

The Pragmatist philosophy when applied to Education, for instance, is in danger of creating in the rising generation a feeling of disjunction from the past, allied to the narrowness and self-complacence that successful practice induces. Pragmatism is not a philosophy at all, but a negation of philosophy, it denies the very possibility of what Philosophy seeks; or if it does not deny it, it yet issues a certificate of truth to whatever may be socially successful at any given moment. As a mode of procedure in Education it certainly has great merits, for Education has to act on a terrene plane; education is pragmatic—but not only pragmatic. If we are going to set up a Philosophy of Society or Worship of Humanity then let us adopt Comte's positivism and arrange our educational schemes accordingly. But we cannot; the mind will not rest merely in society. I think Dean Inge stated a truth when he said "You cannot long discuss education without coming to the question of the existence of God and the immortality of the soul". If society and its history form a mere Nebeneinander or fortuitous chain of events, by all means let us have the apotheosis of society, and set up an altar, not to the Unknown God, but to the Known Society. A million times men have wondered why God, or Fate, or Chance has tantalised us by placing us in a material world and yet plaguing us with the craving for a spiritual world where waters ever approach our lips and, when we stoop to drink, recede. If education is to be the active realisation of the ideal of the spirit, i.e., of philosophy, then it is obviously necessary that in the practice of education the teacher should know what he is teaching for. In the regimented countries of course he does know; the goal is set for him; the Dictator, Socialist or Fascist, is always right—"He knows about it all, he knows, he knows". But in the few remaining free countries the teachers, from university to kindergarten, would welcome some definite pronouncement from Philosophy.

The guidance from Philosophy has diminished for the reason that a philosopher thinks and works alone; his work is neither ethical nor unethical in its nature. He aims at truth and is bound to proclaim it, even if the tragic result should be that the truth is distasteful, if not harmful. (Though it may be said *en passant* that no man can long believe that the truth can be essentially bad.) The educator does not work alone, but always with the pupil, and he deliberately works for what he believes to be good, and hopes, if he thinks of it at all, that the good and the true will prove to be identical twins. It is a fact that teaching makes the teacher for the time being into a conscious moral agent, and even into an idealist. No man, even if a rascal at heart, can be long in front of a class without upholding justice, truth, goodness and even beauty in some degree. I do not think there ever was a teacher in his senses who deliberately to his class praised or condoned cruelty or injustice or ugliness or falsity. A teacher is a practising philosopher. I think it is this urge that makes so many teachers become ethical socialists; they feel the inherent paltriness of much of the competitive economic struggle. While teachers necessarily deal with a Here-and-Now, they insensibly refer their standards to a world that is not a changing shadow world. Yet there is no doubt of the marked tendency for years past amongst thinking men to ignore the supernatural element in Christianity, at least in so far as this is embodied in institutional authority. Nothing is taking its place. There is a need, as I say, for a philosophical fraternity who are prepared to be pragmatists so far as to live their doctrines.

I think I could easily revert to the teaching of Plato and find satisfaction in it. Both he and Aristotle elevate their Philosophy to the contemplation of Deity. Aristotle places happiness in contemplation of the truth, and this contemplation culminates in theology; for him as for Plato, religion is the guiding star of education. "Theology", says Aristotle, "and physics and mathematics constitute the three classes of contemplative subjects, and the best of these is theology, as it deals with the most valuable of the realities." But Aristotle, while recommending that we secure happiness by "becoming immortal", so far as it is possible, yet realises there is a happiness to be won in practical morality, too. And, though it is true that he believes that the citizen should be moulded to meet the form of the political constitution under which he lives, and that, as the State is *one,* education must manifestly be one and the same for all, no one of the citizens belonging to himself, but all belonging to the State, nevertheless, when viewing this philosophically at its highest, he says: "In the *perfect* State the good man is absolutely the same as the good citizen, whereas in other states the good citizen is only good relatively to his own form of government."

It is easy to see in this two-fold aspect of goodness the dilemma that arises for Education in the present world of nationalism and internationalism. If only it were actually true what I stated earlier, that Education is Philosophy at work, and if all modern states had their gaze fixed on Aristotle's good man beyond and including the good citizen, the task of the teacher of history, literature and of the humanities generally would be greatly simplified. It almost looks as if sheer stress of circumstances will force all democracies in self-defence to carry the process of rearmament into the schools—though this, of course, would defeat the end I keep in view, namely, to educate for the good citizen with the eye on the good man, and to raise the man who is only nationally or politically good to the place of the man who is ungeographically good. Education in the highest sense should have no practical aim, or rather its practical aim should be an ideal one, to enfranchise personality, to produce the Man Universal or an approximation to Homo Platonicus or the Idea of Man. In the present condition of affairs the intelligible world of reason is being contracted to a world of will driven by feeling; in other words, the kingdom of irrationality is at hand. Of course science, as I said earlier, is involved in the state direction of human thinking; for example, pure science was abandoned in Russia in 1929, and unless a great change takes place there, science will confine itself to the materialistic and utilitarian bent first given it by Bacon; and our Keplers, Newtons and Rutherfords will be no more. But no! The human mind is stronger than dictators, as Aristotle has proved stronger than Alexander, and Solon than Crœsus, and Socrates than the political tyrants of Athens. The determination of man to know, to utter, and to think freely (to use Milton's language) is above all other craving for liberty, and will reassert itself, simply because no human power can prevent men from thinking.

Thinking, of course, on its lower ranges is at present economic and social; it is devoted to the solution of pressing problems. Hence education is determined at present first by political power and under this by social needs and conditions. Indeed this last condition must always exist, for if education strays out of the orbit of society it becomes detached from any system of human needs except those of the intelligentsia. This is to a large extent what happened in Mediæval times. Philosophy and higher education had been friends in the great Greek days; in fact higher education in Europe arose out of the informal discussions of the sophist-groups of the fifth century B.C., and the founding of the Academy in 387 B.C. may be regarded as the most important event in the history of intellectual culture. When philosophy re-arose in Mediæval times, though it was necessarily subservient to authoritative religion, it once again created the academy—it created the institutions from which our universities are lineally descended. This higher education had at first little or nothing to do with such elements of education as were imparted to the lower orders of the laity. It was concerned with the vast encyclopædia of Aristotle, in systematising, and in subduing it to the demands of authority, in order that revealed knowledge might be supplemented by natural knowledge and that all discords might be resolved. The great services of mediæval philosophy to higher education have been all too tardily recognised. To this philosophy we owe the very existence of those institutions which everywhere now throughout the world are the channels through which are distributed the collected knowledge and technique of the past—with, of course, the modern addendum, facilities for research. From that mediæval philosophy arose a great body of religious scholars whose works are once again, in the loss of direction that harasses our age, being re-examined with a new interest and a new respect. And if a barren scholasticism made men ultimately turn with eagerness to the more humane studies of the Renaissance, it is not to be forgotten that the long training in logic, together with the institutions bequeathed to the new age, were an indispensable precondition for success in the investigation of the material universe.

It is well for us to remember this, that the theologico-philosophical questions at issue between mediæval Realism and Nominalism decided the growth of universities; for when we test any movement by the utilitarian question "Of what use are you?", we must in philosophy defer our answer till we can reach an historical perspective. Further than this. The universities in mediæval times turned out many distinguished men of affairs, trained, of course, in law as well as in philosophy. The training was a very practical one, and it would not be difficult to show that princes and aristocrats innocent of the higher training of the mind frequently employed in administrative posts the men turned out from the philosophical schools. Still further, it is to the mediæval *"studium generale"*, to use the old term, that we owe the professional teaching class, courses of study, examinations, and degrees. This magnificent creation, for with all its imperfections it *is* magnificent, is mainly the result of the Latin genius. The University of Paris I believe it was that first achieved universality when it was removed from local control and placed under the sovereignty of the Supreme Pontiff. Nationalism as we know it, the product or concomitant of the Renaissance, did not then exist; and philosophy, i.e., higher education, like a universal mother, gathered her sons from all quarters into the "nationes", as the students of the various countries were then called. It would not be fanciful to attribute much of Scotland's devotion to education to the fact that even in the nineteenth century Scottish universities, or one of them, retained the three mediæval philosophies natural, moral and metaphysical, and provided distinct chairs and classes in each of these. This gave Scotland a European status in philosophy as well as in education. It is, I believe, a fact that in the century between the time of Hutcheson and that of J. S. Mill a majority of the philosophers who wrote in the English language were professors or at least alumni of Scottish universities.

If we asked, what has philosophy ever done for the world, there is the answer: mediæval philosophy has given us universities, and Greek Philosophy gave us what always must be the marrow of education, the humanities. Education has certainly become an essential social function in our day. The social function of philosophy is either bluntly denied or disregarded. The princes and rulers of this world demand power, immediate returns for investment of thought, practical results—submarines, bombs and gas; politicised science is very practical. Education they can use or misuse for purposes of indoctrination. The true educator directs the pupil in nothing but the great values; indeed he hardly even directs him to these, except by revealing to him his highest self and then leaving him to pursue his way lit by the inward light. Regimented education for local and temporal ends denies Plato's assertion that man is a heavenly, not an earthly plant; it also denies Aristotle's dictum that the nature of a living thing is known by what that thing becomes when it has achieved the fullness of its being. Education when it becomes unphilosophical—that is when it becomes merely national, local, class-conscious, or sect-conscious—then becomes untrue and dangerous; just as, when it is philosophical only, it is useless. As philosophy recedes into its high altitudes it loses contact with earth. In education we feel this. You philosophers can give us guidance as to consistency, rationality and values, if you will come into some intermediate region where we can at least see you.

It is a pity also that philosophers, as I have said, cannot reach more agreement. They are at constant civil war, there is no stable government in their country, and so other provinces of thought and action cannot treat with them as a unity. So it is that little progress is made in philosophy and little practical importance is attached to individual conclusions. While this condition remains Philosophy can never be an independent arbitration tribunal to which different systems of education might refer their disputes. Again, Philosophy cannot enforce its decrees, even if it has any—and, still further, from the nature of its enquiries, it cannot make experimental discoveries, and so it constantly finds its territory being invaded by the nasty little science of Psychology. Had Kant's proud claim to the invention of a final system of philosophical inquiry proved valid, what an unassailable position that would have given to Philosophy! You may remember in his preface to the Critique of Pure Reason he says: "In this work I have chiefly aimed at completeness, and I venture to maintain that there ought not to be one single metaphysical problem that has not been solved here, or to the solution of which the key at least has not been supplied." Alas! for human hopes. Philosophies today are less of a unity than ever to all external appearance.

But at least they keep up the old traditional bond with education, running back through Pascal, Locke and others to earlier thinkers. Dewey writes on Education and founds schools; Gentile is, or rather was, a Minister of Education; Whitehead writes on "The Aims of Education", and Bertrand Russell has several books to his credit, or at least to his name, and is the supporter of a very advanced school. Whitehead's book adds little to Educational thought beyond an analysis of the rhythmic process in Education from Romance through Precision to Generalisation and again back to Romance. Russell is an apostle of freedom. It is unfortunately the case that a man can be trained in the Socratic curriculum of mathematics and philosophy which are designed to bring him within sight of the Idea of the Good and yet can see the beautiful vision of the perfect child which they bring to Russell: "There should", he says, "be no enforced respect for grown-ups, who should allow themselves to be called fools whenever children wish to call them so. We cannot prevent our children from thinking us fools by merely forbidding them to utter their thoughts. . . . Children should not be forbidden to swear—not because it is desirable that they should swear, but because it is desirable that they should think that it does not matter whether they do or not, since this is a true proposition. They should be entirely free from the sex taboo, and not checked when their conversation seems to inhibited adults to be indecent." Russell is an exponent of freedom according to a system of his own that obviously arises from unhappy school experiences and various frustrations wearing a Freudian aspect. He has no scientific or philosophical approach whatever to the problem of freedom in education.

I might say that freedom or the problem of indeterminism is in my opinion of little moment to the teacher. If he is a determinist he will seek to make the environment the best possible, believing that the best stimulus evokes the best response. If he is an indeterminist, he will again strive for the best environment, to give to the free will the opportunity of knowing and choosing the best. Freedom as understood in school-craft is the practical problem of removing the pupil as far as possible from the influence of the mere capricious *"ipse dixits"* of the teacher. The best work, as far as I know, done in this respect is that of the kindergarten founder Froebel, of Montessori, and of Dewey. I will not weary you with detailing what you already know. Simply this: Montessori wishes to withdraw personal interference with children, and to make them in their education perfectly free, controlled only by the necessity of things, of the terrestrial conditions in which they have to live. She aims at an environment stripped of obstacles (*un ambiente privo di ostacoli*) except those inherent in Nature's scheme of things. She has therefore invented autodidactic apparatus which she claims is scientific. Whether it is or not I cannot say. It must be nigh impossible to grade off apparatus in scientific steps in such a way as to meet the growing needs and powers of children. Even in a normal distribution of intelligence it cannot be decisively stated just at what point normal intelligence rises to superior, or sinks to subnormal. But Montessori's general attack is scientific in its conception, and is certainly having an effect through all the realms of school education. Her method is that of self-help in a graded environment so that biological adaptation may be achieved as quickly, as impersonally, and as thoroughly as possible. Sense-training must obviously be the basis of biological adaptation. But Montessori is not a philosopher and strictly the mention of her here is irrelevant. Dewey's work (though I dislike pragmatism) is also a sound scientific conception: to set the child in social surroundings where his own needs and his social contacts will stimulate him to create for himself, to communicate to others, and to absorb from, and co-operate with them. I admire both of these teaching methods. Yet I think the place of the class-teacher is sure, for he is the living embodiment of some philosophy, even if it is a poor or artificial one, and he is to some extent at least endeavouring to convey to his young charges, as Herbart says, "the æsthetic revelation of the universe". This seems a grandiloquent title for a humble primary teacher—the æsthetic revealer of the cosmos and of mankind. Yet he is codifying the child's experiences, rationalising the empirical, presenting some kind of synthesis of the social heritage, and stimulating to fresh efforts to climb unscaled alps. And if he is a technical teacher, whether in a manual arts school or a medical school, he is endeavouring not only to make a man a good workman, but to make a workman a good man.

If time permitted I would offer some account of the philosophy of Froebel, the founder of the kindergarten, a century ago. It will be sufficient to say that his basic principle is the Law of Unity; all opposites such as man as a child of Reason and man as a child of Nature are to be harmonised under this law, as the child grows in the Garten from the divine germ within him to perfect fullness. Prussia sinned against philosophy then as now, for the kindergarten with its little democrats of three was suppressed as a disseminator of dangerous socialistic principles. In that appears the same old obstacle to human progress—authority, nationalism, vested interests. Philosophy becomes dangerous when it embodies its teachings in educational institutions—dangerous to whom? To think philosophically is to think in planetary terms. The spiritual storm which now rages over our world is the first planetary storm in the human record. This is making men run to the nearest shelter—hiding under the wall, as Plato said, till the storm of dust and sleet be past. So, in the confusion, we have a dozen different philosophies of education: naturalism, utilitarianism, proletarianism, and so forth. But all men are dissatisfied—except the writers of German and Italian journals. All thinking men, not drugged with national or class opiates, feel that unless there is something stable above the flux of mundane things the whole of the present turmoil is a ghastly piece of meaningless chaos.

I do not take a pessimistic view, though I feel the hard pressure of present difficulties. I think that the theory of evolution and our mechanical advance have made us concentrate upon a wrong view of progress. The old stubborn questions still demand a solution. Perhaps there is no solution—and therein lies the lure of philosophy. Perhaps, like Faust, who sought to know what drives the roaring loom of time, we shall not cry to the fleeting moment, "Tarry a while, so fair thou art" till we have set to work on the proximate practical ends in education of draining and cultivating the social marsh. But even in doing that practical work, we must have the view beyond. It is encouraging to find so stout an advocate of science and its applications as H. G. Wells writing as follows in "First and Last Things": "The time has come when the modern mind must take up metaphysical discussion again, when it must resume those subtle but necessary and unavoidable problems which have been so markedly shirked for many years, when it must get to a common and general understanding upon what its ideas of truth, beauty, and good amount to, and upon the relation of the name to the thing, and of the relation of one mind to another mind in the matter of resemblance and the matter of difference".

For my part—I speak as a scholar rather than a thinker—I would welcome a return to supernaturalism in philosophy or religion, or both, provided no authoritarian laws were imposed. Propagandism of any sort I regard as unjust to pupils or students; but propagandism of a general philosophic type—giving the young an orientation to all things of good repute—which in the regular course of education should hold aloft the banner of idealism and encourage a belief in something higher than the dreary treasures of naturalism, would be in my opinion both legitimate and laudable. I should like to see, what I have several times advocated in public, a short lecture series in philosophy made free and compulsory in the final year of every university course. That is a fine utterance of William James: "To know the chief rival attitudes towards life as the history of human thinking has developed them, and to have heard some of the reasons they can give for themselves, ought to be considered an essential part of liberal education." You will remember how in the *Republic* after two years' physical training from 18 to 20 there follows a synoptic course to show the relation of the separate branches already studied. "He who has the synoptic mind", says Socrates, "is a philosopher, he who has not, is not." I take it this was implied in the appeal recently issued by a group of thinkers in Britain in the form of a letter sent to the leading newspapers in the Empire. My reference to supernaturalism may evoke dissent. Yet I think no man can completely divest himself of mysticism or obscurantism. I have never been able to believe (though I try to) that all my knowledge comes through experience as ordinarily understood. And yet when I ask myself what knowledge I have attained to otherwise, I must answer "none"; that is, none I can communicate to others. But there is still an obstinate residuum in my own mind—a semi-consciousness of moving about in worlds not realised, auto-suggestion perhaps—yet any Wordsworthian will understand this.

That is no doubt quite an unphilosophical avowal, but it is the avowal of something real, which has manifested itself to me often in the bi-polar process of teaching. You see, education is a human business and teaching is necessarily a personal relationship. Philosophy is in danger of decease or contraction; it dwells apart, too often lonely and inhuman in its detachment and its thought-weaving. Aristotle, in the *Ethics,* quoting his master Plato, tells us that right Education consists in being trained to take pleasure and pain in proper objects. Good! but what are the proper objects in our modern world—so unlike the little hot-house world of Athens! Proper objects as determined by educators today are all those spiritual possessions of man, whether manual or mental, which make up the sum of social inheritance of mankind. Today we do not hold with the Greek view that the life of a mechanic is incompatible with the practice of virtue or philosophy. In regard to "virtue", at any rate, Christianity has democratised it, has given it a new connotation and made it as natural in the cottage as in the palace. Education today must deal with all classes. Religion, or rather Christianity, made its appeal to the very people that philosophy ignored, and hence to the Greeks it was indeed foolishness, as St. Paul said to the Corinthians. Can philosophy descend from her starry heights into the prison house of the modern world as she visited Boëthius in his dungeon? "Methought I saw", he says, "a woman stand above my head, having a grave countenance, glistening clear eye, and of quicker sight than Nature doth commonly afford; her colour fresh and bespeaking unabated vigour, and yet revealing so many years that she could not at all be thought to belong to our times; her stature uncertain and doubtful, for sometimes she exceeded not the common height of men, and sometimes she seemed to touch the heavens with her head, and, as if she lifted it up to the highest, she pierced the very heavens, so that she could not be seen by the beholders."

Speaking as an educationalist to philosophers, I may be permitted to ask, "What is the function of Philosophy beyond federating the various kingdoms of science?" Have you any message for us? Can you illuminate our path? Are we to be left to the mercies of economics and political bullies? This is not meant to be provocative. I ask it in the same innocence as last year an external student in Education asked me, "Which is the true psychology; can you put me on to any book about it?" I told him that if I could answer that question I should be prince of psychologists, and that I had no nice little manual up my sleeve which could provide the required information. Yet I could offer him guidance in his reading and a general evaluation of the various psychological theories of the day. Is it asking too much of Philosophy to do something like this for its old ally and agent, Education? In Education we get our methods from Psychology and Sociology, with a certain amount of direction from Biology. Philosophy unconsciously still operates in the determination of curricula in schools and in the arts course of the university—though even here the accent of education is being placed more and more on immediate adaptation to the environment. The average teacher in school or in the university would be astonished if informed that his curricula were determined by philosophy. Indeed, if it is so, it is only the momentum acquired in the past that is doing it. Much of the philosophy of our day is a mere reconsideration and re-presentation of past thinking. Sometimes, in pessimistic mood, I see philosophy dying in this century. We shall never more have vouchsafed to us a great imaginative thinker. The major problems of existence are insoluble, and philosophy becomes only a playground for the speculations of scientists like Eddington.

Is there anything new (or anything old) that can be guaranteed to enlighten? In democratic countries, of course, philosophy does not now provide metaphysical systems;

democracies work on empirical principles, looking not too far ahead, and trusting to the kindly light within to assure the next step within the encircling gloom. British education does not analyse itself, does not elaborate mystical a priori theories; it just muddles through. But stay, it has one a priori doctrine; it believes in character, in the democratic inborn character, and trusts to that to work itself out in commonsense institutions and commonsense methods. Its schools, at least in England, look not to a rigid state system, but to the headmaster and his staff. And after all, that is the philosophy of Personality—the best thing, when at its best, that we know. But that is not enough—despite the words that Goethe assigns to the Lord, "a good man in his dark strivings is still quite conscious of the right way". Without religion or a philosophical way of life understood and practised, we may in this dark world and wide miss even the one step we are now content with. Education provides not an escape from reality, but an escape into reality, it releases man from the bonds of animalism, it transports him to the region where he becomes what he is or was before the Fall, i.e., the Fall as depicted in Plato from the Idea to an imitation of it. Education can do this. It has at sundry times raised man from myth and superstition, through Logos to Ethos. The ascent of Everest is again calling us. A new opportunity arises for Philosophy, that of adult education, which is more necessary now than the education of the immature. Philosophy is essentially an adult's study. And a new vehicle, the radiolog, is available for the transmission of messages. It is time the orgy of barbarous dissonance and vulgarity that disturbs the "secrecy of the reticent air" should be challenged by what Bridges in the "Testament of Beauty" calls "Music's prison'd rapture and the drown'd voice of truth, Mantled in light's velocity, over land and sea".

Education, as I said earlier, is or should be philosophy in action; Philosophy is then education rationalised and spiritualised. Philosophy is Education seen *"sub specie æternitatis"*, Education is Philosophy practised *"sub umbra* *mundi*". If education loses the light from philosophy, it pursues only proximate goals—many of them will-o'-the-wisps; it will merely aim at fitting the living organism to make his way about in a terrestrial environment. If that is all, we may close the human drama; what is it all but a trouble of ants in the whirl of a million million of suns? But there is more than this. In my own dim way I have seen it and I know it. A quotation from the source of my inspiration—the *Republic*—will make clear my meaning: "Do you think the possessing of all possessions will profit us in any way, if we do not possess the Good, or that the knowledge of all other things is of any value to us if we possess no knowledge of beauty and goodness? . . . This good is what every soul of man pursues, and for the sake of which he does whatever he does, dimly feeling that there *is* such an end, yet hesitating and not holding to a constant faith in it." The hesitation and inconstancy that Socrates mentions here are inseparable from mortal life, and so both Philosophy in thought and Education in action will often be but wavering images of truth, but still they *are* images of it. And perhaps when the ocean of life, so to speak, is less troubled than at present the images of both, reflected upon its surface, may be steadier and may be seen to resemble each other.

THE FRUSTRATION OF THE MATERNAL INSTINCT AND THE NEW PSYCHOLOGY.

By Marion Piddington.

In the opening chapter of *The New Psychology and its Relation to Life,* Tansley writes: "Nevertheless, a sense of unreality has always clung to the older Psychology, which has seemed to be divorced from life as it is actually lived. It threw but little light on the infinite complexities of human opinion, feeling and conduct, it scarcely helped us with the practical problems we all have to face in our lives; it was, in fact, altogether too academic and abstract for practical use."

These very words of Tansley may be used in criticising the standpoint the new Psychology has taken up in the treatment of the subject of maternal repression—it offers no help in the resolution of this serious problem. The basis of any theory concerning repression must be to ascertain the true proportion of the various instincts, their depth and effect on the mind and health of the individual, their relation to life, conduct and feeling, their tenacity of inherent purpose and the separate part any particular instinct may play in the physical and mental life of the individual.

Psychologists are willing to admit that the maternal instinct does exist; what the great majority of them fail to recognise is that this instinct plays an entirely different part in the mental life of women from the sex instinct, or the urge towards mating. They insist that sex is paramount, the chief controlling force in woman's relations to man, and, preserving that standpoint, are bringing to the new Psychology the "sense of unreality" attributed by Tansley to the old. No attempt has been made to discover the true relationship between the maternal mind and the female body, and the lack of perception as to the root cause of the suffering in so many who experience various forms of repression, leaves women waiting for psychologists to understand fully the maternal instinct, which, after all, is, biologically, of supreme importance in the welfare of the race.

Where are the data to come from for the complete study of this instinct? There can be one source only, and that is from women themselves. Theorising on pre-supposed premises is a practice to which psycho-analysts are somewhat given, and as the foremost members of this profession are, and have been, men, their failure to assess adequately the potentialities of the female mind can be appreciated. But what cannot be condoned is their refusal to hear expert evidence on a vital matter.

The consequence is, in many cases, mistaken diagnosis, which results in unhappiness at least, and mental illness of a grave character at the most. It is useless to create theories out of postulates which exclude the only evidence which is founded on truth and human experience. It is worse than useless: it is unscientific. Yet these scientists will not see that the inferences they draw are thoroughly unscientific, because they do not either collect or examine the wealth of data that are within their reach. When a complete analysis has been made of the maternal instinct and its place among the psychological elements of woman's being, many of the complexes of the new Psychology, now so elaborately diagnosed for our mystification, must disappear.

What is needed, where women are concerned, is a Psychology which will take as a sound basis the hitherto ignored desires of her maternal mind in order that they may be revealed in their true perspective. The world is waiting for the solution of one of its most difficult and pressing problems, which today faces countless thousands of women, and until the maternal mind is understood no solution of this present difficulty can be found. The final enlightenment as to the cause of repression in many women which has worked "results disastrous to the mental health of the patient" may be obtained by that knowledge, understanding and sympathy with the inherited physical instincts of which the new Psychology repeatedly speaks. "Objective knowledge always brings power not to abolish or deny the instincts, but to provide them with channels in which they can find their legitimate and necessary satisfaction."

It is not as though such "objective knowledge" is hard to gain: it lies everywhere at hand. For example, the matron of a mental hospital said: "Many of the women are here because of repressed motherhood." Have not these women been denied the channels in which their most deeply rooted instinct might have found its "legitimate and necessary satisfaction"?

In applying arguments and calculations derived from the primitive and limited standpoint only, the psycho-analysts suppose all women to be still in a state of "untamed activity" without conscious purpose or psychical desire. In many cases where unmarried women suffer from extreme maternal repression the entire mind is obsessed with the continual longing for a child, and in response to this psychological desire, a remarkable physiological condition of the body follows, which is quite devoid of sex feeling. These two conditions working actively together demand redress through fulfilment. Many of the complexes, supposed by the new Psychology to arise from repression of the sex instinct, are the outcome of repressed maternal desires, and should be treated as such. At present they are not. It is in their failure to obtain a proper insight into the workings of the maternal instinct that the psycho-analysts are unable to understand the psychology of motherhood. When women have told them that they want a child, these men, secure in their ignorance, have declined to believe them, and have insisted that it was not a child, but mating that they desired.

Facts and experience show that the maternal instinct should be studied from the broad outlook of everyday human activity in all its relations to the individual, and, above all, with insight as to the meaning underlying the varying emotions and inherited symptoms, expressed in the life, conduct and health of the individual. It cannot be doubted that maternal repression is, under existing circumstances, the root cause of much serious mental trouble and even of actual insanity. How, otherwise, explain the fact that married women become mentally unhinged in many cases because of their childlessness? For this type of woman, sublimation is impossible, even if it is desirable; yet it is this very type which under normal conditions would be invaluable in carrying on the finest characteristics of the race! Because of lack of understanding, all their fine potentialities are sacrificed on the altar of ignorance.

For a married woman to find herself denied children is pitiful and dangerous to her mental equilibrium; but what of the unmarried woman? She is denied husband, home and children. The former at least has the companionship of her husband and the control of home to take her mind in some degree from her mental longings. The latter has the dubious consolation of neurosis where her unhinged mind can give her in fantasy what the world of everyday affairs does not permit.

Preventible sterility in women who remained unmarried has lost us innumerable citizens that can be ill spared, while in marriage women of lesser qualities have multiplied their inferior types, as have others outside marriage through the dysgenic medium of promiscuity. "Woman's interest in sex does not end with the physical act of mating", says Tansley, "but extends to the bearing and rearing of her children." It would be more correct to say that woman's interest in bearing children begins long before the physical union and continues when the instrument of her maternity has achieved her desire for children.

Here again is an example of the insistence of the psychoanalyst that upon sex alone everything to do with the human race hinges. This is why they are able to touch only the fringe of truth in their calculations, and the reason is plain why "many of its concepts and analyses are vague and hesitating". Freud, after completing (like Carlyle's gospel of silence in thirty-seven octavo volumes) his definite conclusions, wrote to me: "The more I have learned, the more difficult I find it to give advice about the definite lines in the difficult matter of sexual behaviour."

McDougall, in writing of the feminine mind and the maternal instinct, said: "This instinct, save in its primary application in the form of the mother's protection of the child, is not, like the reproductive instinct, one of overwhelming force." Here again is shown the complete misunderstanding of the maternal instinct and the incomplete knowledge of the maternal mind. The racial strength of woman's urge for sex union is engendered and intensified by the underlying resolve of her maternal instinct.

In the real psychology of woman founded on facts, the primitive instinct of sex will, by degrees, be dissociated from the psychologically predominant maternal instinct. Tansley says: "We cannot return along the path of increasing self-consciousness to the primitive state in which blind satisfaction of instinct made up the whole life of the human animal; we must advance still further, as we are advancing in the knowledge of ourselves as in the knowledge of the external world. . . . The forces of nature are being brought more and more completely under his dominion, but his human environment is by far the most important."

In this lies the certainty of the preservation of the race; knowledge of individual needs and insight into causes are the means whereby a solution of some of the most pressing problems may be found. Many tragedies will be prevented when women understand what it is they desire most and for what they are physically and psychically fitted. The girls of the future, whose sex training is complete, may with ease work out their own salvation, for they will know as a result of their training whether it is union and motherhood or motherhood alone for which they are best suited.

The new Psychology pays no attention to the subject of maternal repression, the tragedy of which eclipses in its poignant suffering every torment of frustrated human desire. The voluntary actions of those suffering in this way need no explanations. It seems strange that Freud, in giving instances of objects, taken as symbols of some hated person, being destroyed by those suffering from mental trouble, should not have remarked on many of the symbols of the constructive instinct of maternity being loved and cherished, sometimes openly, sometimes secretly, by those whose complexes were none other than the great and simple need for motherhood. I know of many cases where the dolls of childhood are replaced in after years of maternal repression by such symbols. A baby doll was sent to me by a sane and well educated woman past fifty, with the message: "Tell her I kept it for years to cry over." An unmarried woman, mentally affected, nurses an empty bottle perpetually and runs away at the sight of a strange face for fear her baby should be stolen from her. Another imagines herself to be anticipating motherhood. Still another, who had become a secret drinker, was to be seen bending over and loving a strange baby. A child of her own would probably have prevented the formation of the drink habit acquired during years of maladjustment.

Much is being done for young girls at the present time: interest is being shown in the Girl Guide movement, Youth movement, novel sports and other youthful activities and recreations; but what interest is being taken in the future of these girls to many of whom will be denied the normal position in life that we all desire for them?

In marriage, childless women adopt children, or they devote themselves to pets of some kind; others become interested in child welfare movements; there are many ways in which an unsatisfactory substitute for motherhood can be obtained. Though it may be long before a full remedy is widely adopted, yet it is known to men and women of science, and women have availed themselves of this knowledge.[1] Sublimation can be of enormous value with instincts whose proper working is apt to get beyond the individual's control, but the maternal instinct, considered both from the racial point of view and from that of the individual's health, is not one of these. It is a short-sighted policy to cut off the vocation of motherhood from those who, if they desire it now, will long for it with added intensity as the years pass.

The maternal instinct of the unmarried woman is no less strong than that of her married sister, and it calls for just as much sympathy as does the sex instinct. With all the driving force of countless past generations it demands its satisfaction.

According to Tansley, "Woman's sex instinct is rooted in the subconscious." Is not the same true of her maternal instinct? Everything points to the strength of this urge. In early childhood her baby thoughts and actions are those of a mother, and in her riper years they become concentrated into their true perspective in the life of her mind. Her desire for the possession of a child is the root motive forcing its way into the dominant consciousness.

The Bishop of Birmingham once said: "I am a man of strong emotional disposition. I live a chaste life; when temptation comes along, I switch on to my work. I regard every book of mine as a child." Here is the case of the sex instinct being sublimated into constructive energy; in both man and woman this instinct can nearly always be sublimated into something higher and more enduring. But into what channels can the maternal instinct be sublimated? In itself it is the most enduring instinct and the highest creative work, and anything into which its energy is directed will not reach the standard of achievement of the instinct working normally. It is the height of unreason to take the naturally creative productive woman and compel her to divert her creative energy into uncreative channels, however helpful, when by supplying her need she may become what nature intended her to be—the mother of the individual and the race.

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[1] See Marie Stopes, "Married Love" (Chapter IX); Roswell H. Johnson, "Eugenics Review", Jan., 1923; H. J. Muller, "Out of the Night" (Chapter VII); J. B. S. Haldane, "A New Approach to Eugenics" ("The Listener", July 8th, 1936); Herbert Brewer, "Eugenics Review", July, 1934; A. Showbova, "Gynécologie et Obstétrique", 1927; "Facultative Motherhood", 1918, by Waterman Swan (*nom de plume*).

The doctrine of psychic determination and of the springs of all human action must centre round the instincts which are unchanging. These are the only postulates from which to work in the psychology of the life of the mind of the woman. By confusing the maternal with the sex instinct, the present psychology of woman is built on an unsound basis. The term "sex" used by Freud to describe the whole gamut of emotions and desires, is quite inadequate and misplaced. When passive maternal repression gives place to active satisfied maternity and the separate instincts of mating and motherhood function according to the needs of each individual, much will have been achieved towards that last sublimest task of which Tansley speaks.

In a world of potential mothers, many of whom are asking for the right to motherhood, it is inconsiderate for married women with children to reject for others that for which they have no need themselves. There has been a lamentable lack of sympathy with the growing girl in her mental and physical conditions. These are her constructive years when she visions her future hopes for happiness. As Miss Norah March says: "Youth is the formative and determinative period of life." "The behaviour, the character of adult life have their bases deeply rooted in the experiences of child and adolescent life." It is not difficult to see that when a girl realises that marriage and motherhood are not for her, after all the ambitions and feeling of inherent destiny of her childhood, her mind will be profoundly stirred. Freud and his followers have made up their mind as to the cause before they have ascertained the facts. They take no account of mental symptoms, they reject information as untrustworthy because it does not chime with their theory, and they disregard the conscious statements made to them by women, who are able to give reliable evidence because they themselves are the silent witnesses of their own personal experiences.

The elucidation of repression can hardly be said to have been achieved when maternal repression as a specific condition is not to be found mentioned in the writings of the psycho-analysts.

The instinct of motherhood is unlike anything else; it must, therefore, be classed differently, treated separately, and the mischief of thwarting it must be recognised in everyday life as well as in many cases of mental pathology. The inclusion of this distinct and separate instinct in the general expression "sex" will not satisfy those who know that it is because of their maternal instinct that they represent continuity, and in that continuity lies the human secret of immortality. All instincts, save maternity, proceed along the general lines ordained by their usefulness or otherwise; in many cases it is the maternal instinct that is repressed in women. It makes no difference whether the inherent force of maternity is working unsuspected by the individual; or whether the renunciation of the desire for motherhood is an effort of conscious will; or whether it is an unrecognised process forced by the dictates of society, economic condition, or other conditions—the frustration of this inherent force results in repression.

That repression exists cannot be denied, and until the psychologists recognise the potency of and harm caused by this repression, it must be said that the new psychology has not achieved its purpose.

It is very interesting to read the description and symptoms of various mental hysteria cases treated by the psycho-analysts. The summaries are of particular interest in showing what compound complications may arise from attempting to diagnose symptoms with full knowledge of technical expressions and their relation to different disorders, but without any appreciation of the depth of the maternal instinct. To demonstrate this, I quote, almost in full, one case mentioned by Jung in his *Collected Papers on Analytical Psychology* (pp. 3-7, 15), beginning with the summary.

SUMMARY.

"Miss Elsie K. is a psychopathic defective with a tendency to hysteria. Under the influence of nervous exhaustion she suffers from attacks of epileptoid giddiness whose interpretation is uncertain at first sight. Under the influence of an unusually large dose of alcohol the attacks develop into definite somnambulism with hallucinations, which are limited in the same way as dreams to accidental external perceptions. When the nervous exhaustion is cured, the hysterical manifestations disappear.

"In the region of psychopathic deficiency with hysterical colouring, we encounter numerous phenomena which show, as in this case, symptoms of diverse defined diseases, *which cannot be attributed with certainty to any one of them.* . . . Many of these states, however, still await thorough scientific investigation; at present they belong more or less to the domain of scientific gossip. . . .

"*The genesis of the peculiar frame of mind of these persons is for the most part lost in obscurity.* . . . In view of the often great historical importance of these persons, *it is much to be wished that we had some scientific material* which would enable us to gain *a closer insight into the psychological development of their peculiarities.* . . . German scientific literature is very poor in this respect; indeed there seems to be a *real aversion from investigation in this field.* For the facts so far gathered we are indebted almost exclusively to the labours of French and English workers. *It seems at least desirable that our literature should be enlarged in this respect.* These considerations have induced me to publish some observations which will perhaps help to further our knowledge about the relationship of hysterical twilight-states and *enlarge the problems of normal psychology*" (italics not in text).

In this summary, after a careful enumeration of the symptoms of this "psychopathic defective with a tendency to hysteria", the weakness of the diagnosis is admitted in such phrases as the following: "We encounter numerous phenomena which show, as in this case, symptoms of diverse diseases which cannot be attributed with any certainty to any one of them. . . . Many of these states, however, still await thorough scientific investigation. . . . The *genesis of the peculiar form of mind* of these persons is for the most part lost in obscurity", etc.

Jung then proceeds with observations to further our knowledge concerning "the relationship of hysterical twilight-states and enlarge the problems of normal psychology". The real "aversion from investigation" into this field is perhaps the most significant phrase in Jung's summary, and this aversion, unconscious as it is on the part of the psycho-analyst, is to be explained by their new psychology. It is that of avoiding any investigation which might uproot preconceived notions of their own, on the all-dominating influence of sex and on women and their sex relationships. They know of the maternal instinct, but speak incidentally of it as they would of some interesting but quite secondary function. Although they attach great importance to the instincts, they quite unconsciously avoid this one.

I am deeply convinced that the case of Miss Elsie K. was a case in its earlier stages of maternal repression, which, by the time she had reached 40, led to her being described as a "defective" cured of "nervous exhaustion". At the age of 40 ("la crise de la quarantaine") her repressed maternal sufferings of years might have been nearing the point of realisation that one chief happiness is no longer possible. The mind, at this stage, is often able to abandon its hopeless fight for its desire and to settle down to passive resignation. Only when defeat is definitely known can the maternal instinct be sublimated; while there is any chance of motherhood, hope will never be abandoned.

In cases of married women naturally devoted to children, who have been operated on so that pregnancy is impossible, we sometimes find the same passive acceptance of the inevitable.

This is the chief characteristic of the maternal mind: it seeks only to construct while construction is possible, and when it is no longer possible for married or unmarried women to achieve maternity repression ends, and sublimation into different forms of activities may take place.

If we take the particulars given by Jung of Miss Elsie K. as a young girl and follow out her character, career and development, the case will unfold itself in a new light.

She was a "book-keeper in a large business; no hereditary taint, except that it is alleged a brother became slightly nervous after family misfortune and illness". She was "well educated, of a cheerful, joyous nature, not of a saving disposition . . . . always occupied with some big idea". So far there are no hysterical symptoms. "She was very kind-hearted and gentle, did a great deal both for her parents, who were living in very modest circumstances, and for strangers. Nevertheless, she was not happy, because she thought she did not understand herself. This introversion is a common state of mind of the young woman; the fact that some repression was beginning would account for this questioning of her mind. "She always enjoyed good health until a few years ago"; she was then treated for various maladies; lost her fiancé from paralysis, and "had been very nervous for a year and a half". Then came moments during work when her thoughts seemed to stand still, but she did not fall asleep and made "no mistakes in the accounts at such times". Every woman knows what it is for her thoughts to stand still while engaged on work: visions of loved ones gone, or far away, or in anxiety, suddenly flood the memory and thought is suspended. This is a most normal and natural symptom.

She still works on; then her mind dwells more persistently on something which causes her to be abstracted and she would go to the wrong street and suddenly find herself in the wrong place. Then, most important in the case of Miss Elsie K., a physiological condition arises (fortnightly period) to which I have alluded before. This symptom is of the utmost importance. It is the physiological condition brought about by the psychological aspiration of the woman-mind towards motherhood. I have seen it repeatedly in the unmarried woman who longs for children. This condition frequently becomes the subject for operation by doctors who do not understand the mental state which regulates the physical being of their patients. The mind of the potential mother yearns for a child, and at the same time nature, having prepared with care a habitation for its reception, also awaits this completion of its plans. When the desire remains unfulfilled, the disappointment of mind reflects itself on nature's work for procreation and thwarted hopes spur thwarted nature to revenge itself, and the well-known physiological condition suffered by many women occurs, which Jung found in Miss Elsie K.

The cheerful, joyous girl continues nervous, is overworked and suffers from constant headaches. Her thinking constructive mind is still at work at the time that she performs her daily strenuous tasks well and conscientiously. The ordinary symptoms appear of a girl who does not lead a normal healthy life of wifehood and motherhood. Then follow the sudden divorce of a brother and her subsequent care of him and his child in a serious illness. Still unsatisfied herself, she works as a mother. After this, she went to Germany and experienced great joy at meeting a friend. It is said this experience excited her and deprived her of rest. The two friends took claret together (only half a bottle), an unusual habit with Miss Elsie K. This evidently helped to unbalance her mind and gave it opportunity to disclose its secret, for they go to a cemetery where she tears up the flowers and scratches at the graves. She does not remember this act of suppressed motherhood thrown from the subconscious when left in possession of her resolves.

Miss Elsie K. was then taken to an asylum. On the way there, she spoke "quite sensibly, but was very tired". Outside the asylum they met three boys, who, she said, were "the three dead people she had dug up". She then wanted to go to a neighbouring cemetery, but was persuaded to come to the asylum. Her mind still centred on what she wanted—the children she had tried to get. It is possible that she dreamed of children, and these dreams, had they been ascertained, would perhaps have furnished valuable material. "There is neither anæsthesia, analgesia, nor paralysis. Rough examination of the field of vision with the hands shows no contraction. . . . . She gives her history and tells recent events quite clearly", but the repressed suffering of years finds no outward expression; she has no recollection of what took place in the cemetery or outside the asylum, both of which places were connected in her mind with her desire for children. Then came hallucinations; she imagined "the whole room full of dead people looking like skeletons". She was not frightened, but surprised that she alone saw them. One morning at 4 o'clock "she awoke and heard the dead children in the neighbouring cemetery cry out that they had been buried alive. She wanted to go out to dig them up, but allowed herself to be restrained." Her own children, which had long been created in her subconscious, she now sees in her delirium crying out that they were unable to live. Again in her delirium she recalled accurately the events in the cemetery at C., and those outside the asylum of the three boys; she now states that at the cemetery at C. they were calling to her and that is why she wanted to dig them up. In this state Professor Bleuler explained to her that later on, when in a normal state again, she would remember everything. She slept and was quite clear afterwards. Again the delirium returned and again the dead appeared. "Twice she saw the dead in her bed, but she did not appear to be afraid of them." (How could she be afraid of these phantom children who should have been?) She frequently got out of bed "because she did not want 'to inconvenience the dead'." Another night "she called the dead from the window". Again she saw skeletons. "Although she doubted the reality of the skeletons, she could not convince herself that it was a hallucination." Again convinced of the nearness of her dead possessions, which in her state of delirium were alive to her, she called: "Well, come!—but they're not all there. Come along! . . . The room is big enough, there's room for all; when all are there, I'll come too." Then she lay down with the words: "Now they're all there", and fell asleep again. Not only did her mother mind want them, but she knew herself to be necessary to them; she found expression in providing for the safety, in her fantasy, of the children who might have been her own.

Attacks followed, the last three occurring at the time when nature works hand in hand with the desire of the mind for procreation. "Since then the attacks have altogether ceased. The patient has complained about a number of troubles which she had had all along"; then follow various imagined complaints. Finally she consented to be hypnotised, was a good subject, "and at the first sitting fell into a deep sleep, with analgesia and amnesia", and recalled the chief features of the attack. "It should be added that the patient was not superstitious." After this, apart from some recurrence of headache, her condition left nothing to be desired. Sublimation was now possible; a grateful forgetting had come when nature, ceasing its demand for reproduction, had also ceased its main function at its inception. Only in hypnosis could she "recount the proceedings in the cemetery and during the nightly disturbances".

During the whole study of this girl's condition one is struck by the fact that she was, to begin with, of a normal healthy cheerful unselfish disposition, with no hereditary complaints or taint. What more could be wanted for any woman who is one day to become a mother? At every point can be seen the gradual effect on the mind of the definite thwarting of her deepest maternal instinct. From the time she lost her lover her troubles increased. To a girl of her character, her engagement would mean far more than the actual happiness of companionship and a future husband. In her mind she had become possessed of a father for her children and of children for her husband. From the time she lost him and them, her nervous condition began and increased. To those who think it was the loss of the mate that affected her, the answer is that the most pronounced symptom of her maternal repression was the effect of the mind on the body, culminating in the pronounced physiological condition when mind and body seek, as a rule, no natural union of sex. Further, all her deluded acts and ideas are assignable to the mother instinct, none of them to the mating instinct; her attempted acts are all protective and maternal in character. When her body had ceased its normal functioning for its procreative act, and the impossibility of her desire became consciously realised, she was cured of her hysteria and her imaginings.

When the real psychology of the maternal mind is understood, these cases, of which there are, and always have been, thousands, will cease to exist in the list of "defectives" described by psycho-analysts and medical men. But while psychology, old or new, leaves undetermined and misunderstood one-half of the minds in the human race, we shall continue to have these sad cases which in their earlier stages should be diagnosed as those of maternal repression; and it should be recognised that such repression will often give rise to hysteria or even a definite type of insanity.

REVIEWS.

A CREED FOR SCEPTICS. By C. A. Strong, LL.D. Macmillan & Co., London., 1936; 6s.

The five essays in this book present in its "final form" the peculiar system, mixture of critical realism, panpsychism, evolutionism and determinism, to the construction of which Strong has devoted his life. He retains an open fidelity to almost all the pre-critical categories, substance, power, comprehension, creation, units and the like, though it does not appear that in his account of them they are any less vulnerable to the criticisms of Hume and Kant than they were in the hands of Leibniz. In this, however, he has the merit of consistency, for if a man intends to bring forward a representationist view, it is as well that he should defend the logic upon which it stands. But of greater merit is the fact that Strong has most to say on the question about which representationists often say least; the question, namely, of the way in which the sense-datum does convey or represent its object. What is of main importance, then, is the careful theory of cognition—its origin and nature—which emerges in these papers; indeed, the short final essay which gives the book its title, and for which the rest is a preparation, consists largely of commonplace moralising.

A weakness evident in all the essays is that while he is prepared to accept a theory which makes free use of the "inexplicable", the indefinable, and of that which can be justified only by our "relying upon our instincts", Strong rejects alternative views on the slightest grounds. Thus in the third essay (written in French) on *L'Être et le Devenir,* he rejects the conception of time as duration because of the difficulty of accounting for the "true present". But this is not so much an argument against the infinite divisibility of time, as an objection to time because of its divisibility; or because of the fact that it cannot be arrested. But having arrested time, having decided that only on a theory of instants can we speak of the "true present", he is faced with the question of lapse and continuity. "L'instant contient l'univers *actuel.* Mais l'univers actuel n'est pas tout ce que contient l'instant; autrement il n'y aurait pas de suite. . . . Alors, il y a dans l'univers de chaque instant quelque chose de plus de son être actuel, à savoir, son être futur sous forme de puissance." Hence, continuity is established because there is an "identity of derivation" between the universe at this instant and at the next. Despite Strong's claim to be relying, on this question of power, upon his instincts, we should say that the whole theory is sheer invention. And if, as Strong desires, we seriously eliminate duration as an original factor, we cannot show how "the universe", in its next state, could succeed the present. If the future being of "the universe" exists now, in any form, then that is part of the present being of "the universe", and the matter of lapse is made no clearer. Hume's original criticism of the conception of power is effective against Strong's whole doctrine of space and time.

On the main question, that of cognition, the defence of the doctrine of the sense-datum is similarly inadequate. "The seen flash and the heard sound are both, in different degrees, *later* than the real event and cannot be identical with it. In looking up at the starry vault, we see simultaneously objects that existed and from which the light set out a varying number of years ago; these past objects are known by means of a single substitute which contains them all and is in the present. In double vision two substitutes are seen where there is but one thing—a clear proof that they are substitutes." But, obviously, this begs the question. Nothing is said to show why we cannot be said to have direct perception of something after it has ceased to exist. If physical science demonstrated that some time must elapse between an event's occurring and my perceiving it, I should accept that as being so, and as disproving Strong's view that what is seen must occur simultaneously with the seeing of it. But in all this there is nothing to suggest the need for an intermediary; the statement "the seen flash is later than the real event . . ." involves the unsupported assertion that we do not perceive the real event.

If, however, our knowledge were knowledge of the "substitute", we could not make the distinction between the date of our perceiving and the date of the perceived. The question is, therefore, whether Strong can show that what we know is the object, and not merely the substitute. He distinguishes three factors in cognition: "sentience" (a group or flow of "minimal feelings" caused by the object); our motor response *to the object*; and the sensations reporting our response. What Strong most definitely insists upon is that our response is a response to the object, not to the "sentience", and that the sense-datum is conditioned by all three factors. Thus, we do not begin with a sense-datum and argue to an external thing, but since the sense-datum arises as the externalisation or projection of a "flow of sentience" or is produced by a motor response directed "outward", it cannot but be taken as external, or as cognition of the thing.

A few sentences taken from various places will bring out the drift of the argument: "[The sense-datum] is essentially a picture of the real which supposes the bridge to have been crossed." "In determining the motor-response, the visual sentience acts as if it were the object, and as if its characters were the characters of the object. It is like an actor on the stage who *is* Hamlet. *The fictive presentment of an object thus engendered is the sense-datum*. . . . We cannot act as if a state of ours were external and do so regularly and automatically without its appearing to *be* external. Sounds, though as sentience they are vibrations in us, are heard as external events. . . . Thus sense-data arise by the interval being treated as external—a harmless fiction."

It will be seen that Strong's argument is of some importance in stressing the fact that we do not start from "ideas" or "sense-data" or "knowledge", and attempt to proceed from that to contact with "the real". On the contrary; we may say that we end with cognition; our knowing something, or our arriving at belief we can only take as indicating that we have come to terms with the object with which we have been interacting. Thus, as Strong suggests, the question of the existence of objects corresponding to our perceptions does not arise; cognition is a function of impulse, or "intent", and impulses are directed towards objects. But it may be argued that the theory of sense-data is a going back upon this doctrine; and, accepting Strong's account of the composition of sense-data, it would appear that the treatment of sentience as if it were external is anything but a harmless fiction. In any case, the whole account of the direction of impulses outward, and of the way in which the sense-datum impersonates the object implies the falsity of the view. "In touching the table, all that I actually feel is a compression of the skin, but I do not attend to this feeling; I seize its meaning and say that what I experience is hardness. In touch, what is implied by your resisted pressure is a resisting real thing." But if that were *all* that I feel, the feeling would have no meaning; and the implication referred to in the second sentence could be drawn only if the two things, the pressure and the resisting object, were experienced in the same way. There is a similar begging of the question in his reply to agnosticism. "To deny the reality of external things is to forget we are animals. Animals are creatures living in an environment to which they must adjust their relations in order to survive . . ." This is merely to assert what is in question; and it is evident that the biological argument could have no force for anyone who insisted upon taking the implications of critical realism seriously.

Thus, what is indefensible in Strong's argument is the separation of "intuition" and "intent". We do not, in fact, believe that what we "intuit" merely impersonates, or functions as, what we "intend"; it is only because we take what we "intuit" to be identical with what we "intend", as Strong admits, that belief can enter as a factor in our activities. But if subsequently we discovered that such impersonation occurred (and the substitution of "fictive presentment" for the more usual "correspondence" does not alter the position, beyond suggesting, falsely, that the main problem has been solved), then nothing could convince us that "knowledge really is knowledge". Though the point is too large to be discussed here, it might be said that Strong's own theory of the ultimate nature of things as "sentience" ("suns must have sentience that earthlings may have awareness") is characteristic of the agnosticism, of the breaking down of observable differences, that results from the doctrine of the datum, though, paradoxically, it is advanced as an answer to the sceptic.

P. H. PARTRIDGE.

HOW WE THINK. By John Dewey. D. C. Heath & Co., 1933. Pp. 301. Price: 7s. 6d.

This new edition of a work which appeared originally in 1909 is described as a "restatement" of the relation of reflective thinking to the educative process. A certain amount of new material, chiefly of an illustrative character, has been introduced, and there has been some rearrangement of chapters; the new edition also contains an index and, in the table of contents, sub-headings for each chapter. The reviewer's impression is that the textual alterations are of slight importance and that, in the main, the attempt to correct baldness of exposition has resulted in a loss of vigour.

It is to be expected, indeed, that, if a position is itself confused, more detailed presentation will result in diminished persuasiveness. Dewey's main shortcomings are to be found in his treatment of logic, but criticisms may also be passed on his general attitude to the "educative process". When we discuss education, there are two things that we chiefly have in mind: (*a*) learning as a process (what we do when we learn), (*b*) learning as an acquisition—the sort of thing we refer to when we speak of an "educated" man. The relation of "reflective thinking" (i.e., inquiry) to "being educated" in the former sense is that they are the same thing. We can, no doubt, usefully inquire how far a so-called educational institution does educate in this sense. But all the time the inquiry is subordinate to the question of Education in the broader sense, the question of absorption in a certain culture, participation in certain ways of living. Present-day educators who attempt to deal with method, as distinct from subject-matter or curriculum, are simply beating the air; their exhortations are absolutely barren, they are in no case to develop the "open-mindedness", "whole-heartedness" and "responsibility" of which Dewey speaks (pp. 30-33), but rather subserve the narrowest practicalism, because they do not establish contact with the disinterested movements which constitute culture. If it is the case that "there are built up detached and independent systems of school knowledge that inertly overlay the ordinary systems of experience instead of reacting to enlarge and refine them" (p. 259), it is because the criticism of established interests that inevitably follows from "educated" thinking, is not wanted. This is not to say that educational institutions have no part in culture, but only that their cultural tendencies are continually obstructed, and that they will be advanced not by considerations of "method" but by concentration on *subjects*.

The opposition between Learning and Utilitarianism is obscured by Dewey in his discussion of "abstract" and "concrete" thinking (that which involves "delight in thinking for the sake of thinking" as against "adjustment of external means to ends"; pp. 226, 7). "Methods that, in developing abstract intellectual abilities, weaken habits of practical or concrete thinking fall as much short of the educational ideal as do the methods that, in cultivating ability to plan, to invent, to arrange, to forecast, fail to secure some delight in thinking, irrespective of practical consequences. . . While education should strive to make men who, however prominent their professional interests and aims, partake of the spirit of the scholar, philosopher, and scientist, no good reason appears why education should esteem the one mental habit inherently superior to the other and deliberately try to transform the type from concrete to abstract. Have not our schools been one-sidedly devoted to the more abstract type of thinking, thus doing injustice to the majority of pupils?" (p. 228). It is interesting to note here that Dewey thinks of the schools as satisfying the requirements of particular pupils and not as a field of common activities and the development of a common culture. But the important point is that, whatever may lead up to and follow from it, it is only "abstract" thinking that *is* learning (or education). It is only by laying aside his preference of one "practical consequence" to another that a man will really *think out* a problem—granted that, having done so, he may be able to produce a consequence which he prefers. And it is this thinking out of things that constitutes the education of anyone who can be educated at all. This is why we must discount the common objection to the training of all pupils in the same way as those who are going to the University.

Similar considerations apply to Dewey's brief remarks (p. 66) on moral training. "Indeed, the *deepest plane of the mental attitude of everyone is fixed by the way in which problems of behavior are treated.* If the function of thought, of serious inquiry and reflection, is reduced to a minimum in dealing with them, it is not reasonable to expect habits of thought to exercise great influence in less important matters. On the other hand, habits of active inquiry and careful deliberation in the significant and vital problems of conduct afford the best guarantee that the general structure of mind will be reasonable" (italics in text). We may say, on the contrary, that it is only by developing habits of thought on "less important matters" that we come to be able to think disinterestedly on human affairs, and that what makes this particularly difficult is just our special concern in these affairs with "practical consequences". The loose thinking that prevails on social (including educational) questions—the attempt, in particular, to exempt them from the operation of causality—is due, above all, to the lack of a foundation of scientific rigour. It may be remarked, incidentally, that training in rigorous thinking is itself moral training, and that pupils so trained will have no need for training in "character", either before or after they come to the strict consideration of "problems of conduct".

The compromise between "abstract" and "concrete" which characterises Dewey's general views on education, is equally notable in his treatment of "Logical Considerations", which occupies the central and longest part of the book (pp. 71-202). Distinguishing between thought as logical form, or product, and as psychological process, he gives the following (p. 72) as one of the important differences between them: "The subject matter of formal logic is strictly impersonal, as much so as the formulæ of algebra. The forms are thus independent of the attitude taken by the thinker, of his desire and intention. Thought carried on by anyone depends, on the other hand, as we have already seen, upon his habits. It is likely to be good when he has attitudes of carefulness, thoroughness, etc., and bad in the degree in which he is headlong, unobservant, lazy, moved by strong passion, tending to favor himself, etc." Other distinctions are that the forms of logic are constant, while actual thinking is a process, and that the forms pay no attention to context, while actual thinking always has reference to some context. (This material, it may be noted, does not appear in the first edition.) Further, he says (p. 74): "Logical forms such as one finds in a logical treatise do not pretend to tell *how* we think or even how we *should* think. No one ever arrived at the idea that Socrates, or any other creature, was mortal by following the form of the syllogism. If, however, one who has arrived at that notion by gathering and interpreting evidence wishes to expound to another person the *grounds* of his belief, he might use the syllogistic form and would do so if he wished to state the proof in its most compact form. . . In short, these forms apply not to *reaching* conclusions, not to *arriving* at beliefs and knowledge, but to the most effective way to set forth what has already been concluded, so as to convince others (or oneself if one wishes to recall to mind its grounds) of the soundness of the result."

It may be remarked, on the former passage, that it no doubt depends on a person's habits whether *he* thinks validly or fallaciously, but this would give no ground for distinguishing between what is validly thought and what is in logical form. It is not in the least apparent, in the second place, how what was never a method of arriving at conclusions could be taken as the most convincing way of setting them forth, or as having anything to do with them. What Dewey is again obscuring here is the question of subject-matter, the fact that we are concerned with the discovery of certain actual forms of relation, however that discovery may be made. And, throughout his subsequent discussion, he covers over, by the use of vague and question-begging expressions, the fact that the question is always of the assertion of propositions and the drawing of syllogistic inferences. Thus, in connection with "good judgment", we are told (p. 124) that "there is a certain feeling after the way to be followed; a tentative picking out of certain qualities to see what emphasis upon them would lead to"; and, in regard to "analysis" (p. 157), that the "analysis that results in giving an idea the solidity and definiteness of a concept is simply emphasis upon that which gives a clew for dealing with some uncertainty"—where "emphasis" means the assertion of a proposition, and "leading to" or "giving a clew" means syllogism. So with the statement (p. 114), on a "conjectural idea" or hypothesis, that "Reasoning shows that *if* the *idea* be adopted, certain consequences follow". The "processes of thinking" described in these ways are nothing if not formally syllogistic.

Dewey's departure from formal logic comes out in his distinction (p. 104) between "data (facts) and ideas (suggestions, possible solutions)" which are "the two indispensable and correlative factors of all reflective activity"; his equating of the second factor with *inference* (instead of recognising that what is believed and what is supposed are alike propositions) is a sample of his logical looseness. It is not surprising that an instrumentalist logic should appear as a doctrine of "concepts", and the two chapters on Understanding (IX, Ideas and Meanings; X, Conception and Definition) are continual evasions of the fact that what is in question is always propositional—that recognition of "meanings" is recognition of the fact that something has some relation to something else, that the "standardising" of our knowledge by conceptions is knowledge of universal propositions, that the "educational significance of concepts" amounts to the fact that in knowing at all we are knowing sorts of things and relations between sorts of things, that the "growth of conceptions" consists in finding connections and distinctions among the ways of working (qualities) of the things we know. And what appears as *method* in all this is still syllogism, whether it is used for the proof of conclusions or for the verifying or falsifying of hypotheses (the Socratic method, as in the *Phœdo*), the application of this to education lying simply in the fact that in any field of study there are such connections.

Thus the appeal to actual processes of thinking, as against formal logic, has no educational force, and the important matter remains that of the choice of subjects. An analysis of the social forces (including the influence of teachers) which inhibit absorption in culture might be of considerable value, but moralisings on the rousing of interest in unattractive subjects, on the "ideal mental condition" in which the attitudes of work and play are balanced, on the combining of largeness of vision with skill in execution, can hardly be so.

JOHN ANDERSON.

AN INTRODUCTION TO THE THEORY AND PRACTICE OF PSYCHOLOGY. By Ll. Wynn Jones, M.A., Ph.D. Macmillan, London, 1934. Pp. 308. Price 12s. 6d.

Dr. Wynn Jones does not attempt, in his introduction to psychology, to give any systematic account of the main schools of psychology, but confines his attention almost entirely to the work of the Spearman school, of which he is not the least distinguished member, and of fellow-workers in the field of experimental psychology. He assumes as his starting-point Spearman's laws of cognition, and endeavours to show how they operate in various types of human behaviour. His text-book cannot be recommended to the novice as an adequate account of psychological theory, but it should serve excellently as an introductory account of the particular problems it considers; especially as it includes a multitude of references.

As would be expected, these problems are mostly of an epistemological character. Commencing with chapters on auditory, visual and tactual perception, Dr. Jones next considers memory (especially in relation to "g") and imagery, with special emphasis upon "eidetic imagery". Intelligence tests and the "g factor" are considered in some detail; and allied chapters are those on the nature of learning, progress in learning, practice and fatigue and the reliability of marking. Many chapters are devoted to topics connected with artistic pursuits, these including an account of wit, fluency in association and imagination, experimental æsthetics and psychological tests in music. Manual dexterity, perseveration, sensitivity and the Weber-Fechner law are other topics dealt with in fair detail; while statistics forms the subject of a special chapter. In this latter chapter, of course, no attempt is made to derive the various formulæ, but most of the basic formulæ are presented to the student, and some account is given of their general significance.

One weakness which this text-book shares with so many others is that the various chapters do not form any part of a connected argument, nor are they even grouped under wider headings. Chapters dealing with very similar material tend to be juxtaposed, but this is all the connection one can find. Such disorganisation is not, of course, entirely accidental, for a psychology which thinks of mind in terms of scattered abilities and has no theory of what it is which is capable of these various procedures is quite unable to give a connected account of mental processes. Nevertheless, some of the more striking formal weaknesses of this text could have been avoided. One wonders, for example, what the novice to psychology will think of that science when he finds himself confronted by definitions of experience, intuition, and belief, Spearman's "ultimate psychological laws", a discussion of the accuracy of introspection, and a long mathematical account of the normal curve, all within the compass of a single introductory chapter.

Each separate chapter in the text, however, has some sort of plan in so far as each commences with an account of some particular piece of experimental work, always described with admirable lucidity and detail, and concludes with a discussion which ranges fairly widely over the subject matter of the chapter. This is in accordance with Jones's dictum that " 'experimental psychology' without theory is futile and that 'general psychology' without experiment is sterile" (Preface). Thus Jones professes a vast contempt for what he calls "brass-instrument psychologists" who have concentrated on work in the field of memory because they could obtain in that field "that experimental control so dear to their heart" (p. 48). What may be pointed out, however, is that the narrowness with which the scope of psychology is understood by the Spearman school itself flows directly from this insistence upon experimental work, and that the really basic questions of psychology can never be decided by this means. In fact, the emphasis on experimentalism is but one evidence of the practicalism so prominent in modern psychology, the desire to "get things done" which leads psychologists to set themselves up as authorities in fields like æsthetics and sociology, because they consider that they can obtain quantitative conclusions about individual differences, whereas the theorist talks in vague generalities.

Thus Jones never hesitates to point a moral even on amazingly inadequate grounds. For example, he writes that "An important investigation by Presswood . . . suggests that many adolescent boys, who do not proceed to the secondary schools, show little or no advance in their comprehension of words during the two years after leaving the elementary school. If the concept forming process is not sufficiently developed at fourteen years, then the argument for raising the school age to fifteen receives further justification" (p. 111). This is a typical example of the experimentalist's fallacy that only one factor is varying when, in fact, a host of variations are in question; and, further, of the psychologist's tendency to underestimate the effects of social pressure. It seems to the reviewer quite evident that a person's vocabulary increases not in relation to his "concept-forming processes", whatever this is supposed to mean, but as his needs develop, i.e., in relation to his practical dealings with things. The boy who remains at school is continually finding new words necessary in the course of his literary creation and appreciation, new demands are continually made upon him in respect of vocabulary, whereas the boy who leaves school at the elementary stage commonly enters some social group where he does not find any great extension of vocabulary necessary, and, in fact, where any employment of words not in common use may be regarded as a species of affectation. Put him to a trade and he will soon enlarge his vocabulary with the new terms necessary in his trade: a fact which itself indicates that it is not a matter of "concept-forming processes" or of cognitive capacity, in general.

It is this relation of learning to what we need or what we pursue which one finds conspicuously absent in the Spearman school generally, and Jones is no exception. Conation and affection enter psychology as Jones conceives it simply as the enemies of the experimentalists, awkward influences which disturb the regularity of quantitative results. The words "affection", "feeling", "instinct", "complex" do not even appear in a fairly detailed index.

Far more sharply than most modern psychologists, Spearman distinguishes between cognition, conation and affection, and seems to regard these as alternative, although interacting modes of mental activity, of which cognition is the one of central importance. It is this theory of mind which Jones assures as the basis of his text-book. "The whole subject of intelligence testing", he writes, "becomes greatly clarified if it be realised that what should be tested is the individual's efficiency or power in the operations which are covered by the three qualitative laws or principles already stated, namely, the excellence of his self-awareness and of his eductions of relations and correlates, always assuming that affective and conative factors are being kept under control" (p. 79). Thus it is assumed that there is a special cognitive element in the mind, and that it is possible to discover something describable as "cognitive efficiency" without taking any account of the feelings and strivings of the individual. If, on the contrary, we affirm that knowing is one form of striving, one way of dealing with problems, and, further, that striving is a relation which holds between minds and other things, or between one part of the mind and another part of the mind, we shall not be in the least inclined to accept this account of the matter. There will still be the question, say, of the "span of consciousness", of how much can be known at a certain time; but the only way of finding out how much can be known is to induce people to know, and this means appealing to the interests of the emotional activities which constitute their character.

Such an account of the mind is explicitly rejected by the Spearman school: although it is at any rate approached in Spearman's assertion that "in general, a person's cognitive ability may be regarded as an instrument or *organ* at the disposal of *any* of his conative activities" ("Abilities of Man", p. 3; Spearman's own italics), because if we meant by "cognitive ability" the physiological apparatus by means of which we know, this account of the matter at least makes it clear that there is not a faculty of knowledge within the human mind, but that knowing is a mode of activity of particular mental processes, and more particularly, is a means of bringing about what we desire. However, Spearman, to the reviewer's knowledge, nowhere develops a theory of the nature of these striving processes; and it might be suggested that such a theory is impossible while feeling is regarded merely as a consequence of action or as something suffered. His more general way of looking at the matter appears in the assertion that "the intensity of cognition can be controlled by conation" (Jones, p. 33), as if we can know without striving, but can know better if we do strive, in which sense of the word, conation is used narrowly as being equivalent to concentration. He then finds it possible to argue that conation can interfere with cognition, because, he says, if we try too hard, the clearness with which we know is detrimentally affected; and, again, if we give children incentives in the way of money prizes, their performances in tests may deteriorate rather than improve. But all this means is that striving after money is not the best way of succeeding in intelligence tests, or again that striving to concentrate may not be the most efficient method of thinking; in fact, that success comes when we are interested in what we are doing, not as a means to anything else, but simply because we like doing it; and when what we are interested in is doing a thing and not getting ourselves to do it. We can admit all this, and still maintain that we can learn only what can in some way be connected with emotional activities which constitute our character, and that our knowing is not the work of a special cognitive part of the mind. On the view that it is, it is impossible to understand the whole development of our intellectual interests and, more particularly, the nature and conditions of error. This latter, of course, is a question in which Spearman is particularly interested, but his explanation in terms of "replacing the belief derived from the neogenetic principles by that which comes from the quantitative ones, especially in the form of associative reproduction" ("The Nature of Intelligence", p. 288), even if it were correct, gives no account of how this replacing comes about and what forces are responsible for it. It is on this type of problem that we might have expected some consideration of Freudian theory, but Freud appears only once in Jones's text, in connection with wit, where Jones quotes with approval Greig's comment that "the misconception of wit as economising psychic expenditure arises through confusion of speed with force. We have it on good authority [Polonius!] that brevity is the soul of wit. A really effective witticism does its business in a flash. But speeding up behaviour in this way is not the same thing as economising effort: quite the contrary" (p. 106)—a typically superficial misunderstanding of Freudian theory, as if Freud meant that it is quicker to say witty things than foolish ones when, in fact, he is referring to the possibility of releasing repressed energies by means of the wit-mechanism, and thus saving the energy required for repression. It is not by these means that a comprehension of Freud's great contributions to general psychology is to be obtained.

As a final point, two quotations may be given as testimony to the confused use of correlation in modern theory. On page 58 Jones writes: "the validity of a new test is to be determined by correlating it with the estimates of intelligence given by a reliable teacher". On page 91: "With teachers' estimates of intelligence the extent of the correlation is only 0·30. In view of the unreliability of the estimates as compared with tests such a result is not surprising."

J. A. PASSMORE.

ADOLESCENCE. By L. A. Averill. George G. Harrap & Co., Ltd., London, 1936. Pp. 496.

Although the review copy of "Adolescence" comes from an English publishing house, the author is, of course, a well-known American psychologist, and the book is about American youth. Some Australian parents and teachers will find reason here and there to be thankful that this is so. The wise guidance of the adolescent offers difficulties everywhere, but the difficulties appear to be greater in the United States. However, most things are.

While he admits the great value of experimental and statistical research, Averill believes in studying individuals rather than large groups of people. The technique he has used is therefore the case-method. His book is the outcome of accumulating and examining, over a period of 15 years, individual case-studies of adolescents in all stages of adjustment and of maladjustment. Each chapter begins with a few extracts culled from relevant and representative individual records, and all generalisations are backed by an abundance of particular examples.

The topics treated are just those which one would expect. After an introductory discussion of the pre-adolescent phase, there follows a full and clear account of the physical changes of adolescence. Thereafter come chapters on the misunderstandings between the younger and older generations, on the relations of adolescents with their parents, the interests of the adolescent, the relation between adolescence and delinquency, the school and the adolescent, the rôle of sex in adolescence, the adolescent's ideals and morals, and his attitude towards religion. There is also a chapter in which Averill tells the adults of the community that any faults which youth may show are due not so much to youth itself, but to society in general. He makes definite suggestions concerning the reforms which are necessary in homes, in schools, and in social institutions, if the world is to be made safe for the young.

Although full of sympathy for the adolescent, Averill is rather perturbed by certain of his and her interests. Without blaming the young, who are only imitating their parents, he worries about their predilection for occupations with a "kick" in them. For example, he dislikes the ubiquitous automobile.

"Possibly the advent of the automobile—itself the product of the machine age—provides one of the most striking instances of a potentially negative influence upon the younger generation. . . . The automobile has meant the complete emancipation of the younger generation from the older; it has provided the means of acquiring a new independence and a new irresponsibility; it furnishes a hitherto undreamed of means of developing all the negative traits of character that are associated and allied with indolence, time-wasting, and recklessness."

Indeed, reading Averill's attack on the motor-car, one begins to suspect that there may be something to be said for our high tariff walls.

Again, Averill certainly has a grudge against the cinema. "It is the screen without question that has been the greatest stimulus to flippancy, coarseness, unmannerliness and immodesty among us all, most especially, of course, among the young. More and more, our manners and our morals, adult as well as juvenile, are coming to be the manners and the morals of the producers of cheap entertainment. Our ideals and principles are coming to be copies of the ideals and principles of the 'movie' colonies. Our standards and our values are coming to be their standards and values. Our whole social fabric is in danger of being inundated by the penetration of impossible codes whose only realm is the fantastic realm of the silver screen." Almost one is convinced that there may be something to be said for our film censor.

In short, if you think that the young are going to the dogs, you can find evidence in this book to support your case. Occasionally Averill lapses into the use of statistics. You may learn, for example, that there are American high schools where 59 per cent. of the girls smoke, where 36 per cent. of the boys drink, where 79 per cent. of pupils are willing to cheat in examinations, where 67 per cent. are satisfied merely to "get by" in their work, where 18 per cent. indulge in sex relationships, where 76 per cent. would do away with war, and where 94 per cent., while acknowledging the occasional desirability of divorce, would like to see the institution of marriage held to be a permanent contract between a man and a woman. Whatever your personal prejudices may be, it seems to me that, if you dislike youth, you can find something to grumble about there.

However, Averill does not dislike the young. On the contrary, he finds in them many qualities to be admired. "They are extremely frank and open-minded, and ready to turn the clear light of their capable young intellects upon sociological problems of every type; they are not moribund by convention; they are aflame for human justice and fairness; they are self-reliant and bold, without being hard." What shortcomings they have he regards as inevitable, having in mind the kind of society in which they are obliged to live.

Averill has not, I think, added very much to what Stanley Hall and Leta Hollingworth had already taught us, the one at inordinate length and the other in more reasonable compass. However, being less prolix than the work of Hall, and more richly illustrated than that of Hollingworth, his book fills a useful place between the two.

C. R. McRae.

LOGICAL POSITIVISM AND ANALYSIS. By L. Susan Stebbing. Proceedings of the British Academy (Humphrey Milford). Pp. 37. Price: 2s. net.

Much has been written on Analysis, and much of the work of the Vienna Circle has appeared in English, since this Hertz lecture was delivered in 1933. But it still serves to bring out certain difficulties in the doctrines in question, while itself not going far enough to resolve them.

The difficulties, we may say, are the standing difficulties in regard to propositions, one of the main stumbling-blocks being the question of *words*. Here it may be said at once that there are real problems of communication, but these are not themselves philosophical questions. It is possible to have a theory of the "logical form" of statements only by having a theory of the forms of situations; and this theory does assist us to specify the issues on which we differ. And here Stebbing's conclusion (p. 36)—"We cannot clarify our thoughts by thinking about thinking, nor by thinking about logic. We have to think about what we *were* thinking about"—is inadequate; it is only because, in so thinking, we are also thinking about logic (i.e., about the conditions of existence), that clarification is possible. And if this process is helped by consideration of words, it is only because words are things and have relations to other things, so that they can be, in the second instance, symbols. The work of Moore, which Stebbing compares favourably with that of the Vienna school, fails, with all its multiplication of possible meanings, just because it avoids the fundamental logical issues. It has to be shown not that the question, which of four different views with regard to the analysis of "Hens lay eggs" is correct, "is entirely independent of the question whether we can *know* that hens do lay eggs" (p. 9), but that that knowledge is incompatible with three of the "analyses".

The only way out is a rejection of representationism in all its forms. It may be true that "any philosophical view which leads to the conclusion that what solipsism *means*, or *intends*, to say is quite correct is . . . obviously false"; but it is by no means the case that "if nothing is *given* except direct experience, and if direct experience is *my own experience now*, then we are indeed forced to solipsism-of-the-present-moment" (p. 26). If it is asserted that X is now experienced by me, then that is asserted as a fact, not as *my* fact, and, as Moore indicated in the "Refutation of Idealism", it is a fact having distinguishable features—each of which, it may be added, is itself a fact. Stebbing escapes from the solipsistic position by saying (p. 36): "The point at issue could be formulated in the question whether there are *final* facts. Can we say that there are facts which make propositions true, or can we only say that propositions are verifiable by reference to my own experience? In my opinion there are final facts, and these final facts are the facts which make propositions true (or false)." This is the usual vain attempt to escape Berkeley by going back to Locke. Obviously I can only verify what I believe by reference to something else that I believe; but what I believe, I believe to be a fact. And any facts that may be in question are themselves *propositional*; otherwise their relevance to my beliefs would be nil. Nothing short of a theory of existence as propositional can get over the difficulties confronting solipsism and "correspondence" theories alike.

J.A.

NOTES AND NEWS.

The Sydney branch of the Association has been reconstituted, the office-bearers elected including Mr. P. H. Partridge, President, Professor H. Tasman Lovell and Dr. A. H. Martin, Vice-Presidents, Mr. A. F. Rath (c.o. Philosophy Department), Secretary and Treasurer, and a committee of graduates and undergraduates.

Two branch meetings have been held. On 8th July Dr. E. R. Walker gave an address on "Psychology and Economics", stressing the problems on which the economist felt he required precise information from the psychologist. An animated discussion turned mainly on the possibility of solving social problems in psychological terms. On 12th August Dr. Susan Isaacs (who was present in Sydney as a participant in the Conference of the New Education Fellowship) addressed an audience of almost 200 on "Psycho-Analytic Evidence". Using illustrations drawn in the main from her own work with children, she indicated the ways in which confirmation of psycho-analytic findings is obtained, stressing enlightenment rather than "cure" as the leading test. Replying to a vigorous discussion, Dr. Isaacs particularly emphasised the untenability of the view that Freud explains all mental phenomena in terms of sex.

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In continuation of the series of addresses to which Professor John Anderson and Professor H. Tasman Lovell have already contributed, the Association will hold a meeting in the Philosophy Room, Sydney University, on Thursday, 30th September, at 8 p.m., when Dr. C. R. McRae will give a paper on "Genius". The price of admission will be one shilling.

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THE MORALITY OF THE SCIENTIST.

By P. H. PARTRIDGE.

AN interesting feature of recent speculation is the increasing attention paid by scientists of all sorts to the social problems and evils of our time, and the growing conviction among scientists that salvation is to be found in science. Doubtless, this is largely a matter of self-defence, not only because the contemporary political development of states makes pure speculation increasingly difficult, but also because, as journalists never weary of pointing out, science itself has contributed heavily to the disintegrating forces in society. Not only are scientists prepared to accept this indictment, but they agree also, if we may judge from a number of recent publications, to the other curious theory, popular journalistically, that the physical sciences have outstripped the moral and social sciences, concentration upon these latter being necessary if science is to give to society the lead it should. This calls for no serious consideration; we may be sure that even the most startling discoveries of moral science would not affect the social attitude of other scientists, since these seem convinced that the fundamental truths of social and ethical science are available to them by intuition. Nevertheless, the question of the morality of the scientist, either in the sense of the ethical beliefs prevalent among scientists, or in that of the ethical qualities of their way of living, is well worth investigation.

It is clear that those who advocate the claims of science as possessing the solution of social evils have at the outset to face the obvious objection that scientists in recent times have scarcely shown themselves capable of giving an independent social lead, have shown themselves, on the

Pp.241-320 reprinted by Kraus Reprint Ltd.

contrary, only too ready to subordinate their work to other political interests. This, indeed, has been a part of the explicit ethic or morality professed among scientific workers: the disinterestedness, impartiality, exactness of science has been supposed to imply social neutrality. But the very uneasiness of conscience among scientists of the day shows a recognition of the fact that their neutrality was not effective, and it is apparently the consciousness of the way in which scientists have played into the hands of anti-cultural interests that is responsible for the recent insistence upon the importance of the social sciences, or the sciences of life. Thus, in a recent work,[1] dealing with just this question, we are given a picture of the natural scientist as an exceedingly simple-minded fellow, whose motives, moreover, are frequently open to the gravest suspicion; the social scientist, we are to understand, once aroused will stand no nonsense. "Wherefore the physical sciences", we are told, editorially, "may in the first place be tools and toys in the hands of men who continue to be naïvely controlled by dogmatic theologies and uncomprehended taboos, but the human sciences promise to give a new form to mind and feeling and to revolutionise philosophical thought. It is because the biological sciences, and especially those of man and mind, have been so long neglected by our universities that the scientist as we know him today cannot be trusted to replace the politician and the priest or even to avoid confusing his own realistic scientific concepts with merely irrational and archaic forms of religious, moral and patriotic sentiments—or the equally unmitigated counter prejudices to those mental habits."

Now, these intoxicated utterances provoke the question whether the social scientist is, in fact, in this favourable position. We should not think for a moment to challenge the accuracy of this account of the social character of the physical scientist, except to say that these authors oversimplify the problem of the physical scientist in representing the question as partly one of "bribes". "There are, it is true, many minor scientists who are seduced from the path of research by the princely bribes which industry offers to those who will turn to applied science." But, granting that there are, still these are irrelevant to our problem, for what we are concerned with here is the obvious incapacity of disinterested speculation to play any dominant part in political development; to use rather than to be used. It is a commonplace that "science" has transformed the whole structure of our society, but in the most important sense, this cannot be said to be true. Distinguishing the great institutions which constitute our society, we might describe each in terms of the system of human motives or the way of life which it organises and embodies: we should, for instance, have no difficulty in distinguishing broadly between the system of motives organised within the institutions of education, industry, and the church. But, realising that the economy of our society has greatly changed, and most other institutions with it, it can scarcely be claimed that it is science as a system of motives, a way of life that has transformed our social structure. It is another way of life, another system of motives ("capitalism") which, employing scientific discoveries, has been dominant in the transformation; all that science has done has been to provide a body of knowledge which these other forces have absorbed on their way. But science, in the other sense, as a way of life, has been in recent times, it is not too much to say, socially impotent—so much so that society is tending towards a form in which this way of life can find no place.

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[1] *Human Affairs*: Edited by R. B. Cattell, J. Cohen, R. M. W. Travers. In this article, I use this as a work of reference since, as it brings together a number of the world's best known social scientists, it presents a convenient account of the present state of social science.

The distinction between science as a body of propositions, and as a way of life, is primary to our argument; it is, we wish to show, the thing, the lack of which vitiates the speculations of these reformer-scientists. Recurring to the admitted social unimportance of the physical scientist as a dominant factor, the question arises whether theorising has any influence upon social development. Even if we leave on one side what may be said in support of such doctrines as the economic interpretation of social history, much may still be said to suggest that speculation plays little part in determining social movements. As individuals, no doubt, what we know or discover will often influence our way of life. But what here is more to the point is the way in which our habits, or our way of living, determines what we learn, what we can accept or understand, and prevents us from learning or speculating altogether in certain fields. And certainly in social theory the inertness of social classes is a factor to be reckoned with —the way, i.e., in which what a person or a class will "try" or think is confined within the limits of an habitual way of living.

This is too large a question to be developed here; but the point must be made that the speculations of the scientist are similarly confined within limits socially imposed, not by "bribes", but simply by the fact that, being habituated to a certain way of life or way of thinking, it does not occur to him that other ways of life are possible or that the categories he habitually employs might be criticised. If it is correct to represent social equilibrium and transformation as a matter of the interaction of quite distinct systems of motives, or distinct ways of life, then we may say in line with this that it is because the physical scientist is not usually aware of the existence of distinct ways of life, or of ways of life differently distributed in society, that his influence tends in general to be socially reactionary. And it may be for this reason also that even the second-rate literary man seems often so much more intelligent than the greatest scientist. For this is what the literary man is, within his limits, largely concerned with: the way in which different motives and sorts of human activity interpenetrate and conflict; so that the human and social naïveté of the scientist exposes him to literary attack.

The essential point, then, is that there are *sorts* of human activity, that ways of life differ qualitatively and that the general character of any society is determined by the quality of the ways of life, and hence of institutions, dominant in it.

Without the recognition of this there can be scarcely any such thing as social criticism, and the social "neutrality" of the scientist has consisted largely in the failure to realise the conflict between ways of life, between the cultural and the anti-cultural. There is no need to labour the point of the physical scientists' shortcomings, but we may take up the claims advanced on behalf of social science. Now, it is apparent from an inspection of the statements of faith in *Human Affairs* that the social scientist is no more immune than the others from uncritical acceptance of conventional ethics, no more aware of differences of quality of ways of life, and hence of the possibility of developing a definite scientific morality as science's contribution to the social struggle. Thus, to take the case apparently least favourable to our argument, it might be expected that the anthropologist, as the student of culture and of the history and function of social institutions, would be peculiarly fitted to advance social criticism of ways of life and of institutions in our society. But it is plain that the anthropologist, unless he is definitely a student of ethical science, will acquire his ethics by suggestion from his environment—thus, the limits of Malinowski's ethical understanding are conveyed by the single sentence, "[magic] makes people join in ritual work for the common good". But, what is of more importance, since, for the anthropologist, religion, sorcery, investigation and divination are all cultural activities, we should not anticipate any real attempt on his part to develop an ethic of science, to consider what way of life hinders and what supports scientific or cultural life. Indeed, the anthropologist's concern with the function of institutions (the function of magic, for example) distracts his attention from the realities of social development; talk about *the* function of this institution and of that suggests that there are certain basic social "needs" which each institution in primitive society and in ours exists to meet. But this obscures the conflict between institutions; we know that in the individual human life a person may pass from a belief in magic or ritual to the development of scientific habits, and the one sort of thinking may increase during his life at the expense of the other. And whether or not a society without religion (or any of the institutions hitherto important) is possible, there can be no doubt that institutions assist and impede one another, and that in the development of societies a way of life will gain or lose in social power. But anthropology cannot tell a man where his support should be given in the conflict of institutions that is occurring around him; his policy will be determined by the ethics he has otherwise developed.

We may say, then, that though science is a cultural activity, scientists have hitherto been lacking in a theory of culture or of progress, and it is partly for this reason that the social importance of science as a way of life has been so slight. Whether the scientist, under any conditions, could exercise any great influence may be doubted; but at least it can be said that a consideration of what is the ethic or way of life that the scientist stands for is a prerequisite of the participation of scientists in social affairs. A further consideration of literature may serve at this point to illumine the shortcomings of the scientist. The view, already suggested, that the artist is in a better position than the scientist to understand, and to effect, the direction of social development is not, perhaps, the popular one, but it is not difficult to support. The best art, in any case, has never been "used" by other social forces in the way that science has; there can be no doubt that art has had a greater social independence; respectability is not rampant among artists as it is among scientists. But these are merely superficial indications of the main point, that the artist, concerned with human motives and their relation, is concerned all the time with the *quality* of human motives—with characterising and distinguishing the motives and ways of life that appear in the social context. There is, of course, no need to emphasise that such qualitative distinctions within minds and within human societies must be made before any ethics can be developed, and before we can raise questions of social progress. But leaving this aside for the moment, we should contend that the superiority of the artist as social critic arises from his recognition of a social structure as a structure of motives qualitatively distinct, and not, as the more utilitarian, less æsthetic scientist and social theorist usually sees it, as a structure of unqualitied, neutral "demanding" or "needy" mechanisms, achieving or missing "satisfaction". If society is nothing more than a mechanism for satisfying whatever demands come to the market, the only social policy for the scientist (and this, as it would be admitted, is the policy most scientists proclaim) is the efficient removal of "maladjustments", the improvement of the technique of "satisfaction". There can be little doubt that the neglect of the qualitative distinctions between human motives and social institutions is responsible for the utter philistinism of most scientists in their pronouncements on social questions, as well as for their failure to recognise the direction of recent social development, a failure of which, as *Human Affairs* shows, they have now become aware.

Thus, it is impossible to see how, unless the scientist develops more of the habits and interests of the artist, he can hope to influence the "tone" or quality of the social life. To treat the question of the social function of science as one of applying scientific technique to social demands is to perpetuate the situation that has always prevailed, and shows that the scientist who puts it forward in these days has not begun even to play with the problem of the scientist's subordination to other forces. And though we cannot argue here the ethical question of what is good, what is bad, it may be suggested that this blindness of the scientist is not merely to be taken as a failure of his social views, but is an ethical lack in his way of life in so far as it represents, as we have seen, a cultural failure, a concession to anti-cultural forces.

Indeed, as we should expect, it is a mark of repressive and anti-cultural motives to insist upon what the scientist does voluntarily, namely, the ignoring of the qualitative distinctions of ways of life, the failure to criticise human motives. We may, indeed, illuminate the shortcomings of the scientist by drawing upon just such a minor author as we have been alluding to. Throughout his work, E. M. Forster distinguishes the two sorts of life, the "inner", and the "outer"; the former being the life devoted to the criticism of human motives and the exploration of the possibilities of human relationships, while the "outer life" flees such considerations and operates within the rigid and conventional framework laid down. Without attempting to give this distinction any greater precision, we may notice that Forster insists (what is obvious in any case) that the latter life is the anti-cultural one, and it may be suggested that for all its disinterestedness and its critical character, the usual scientific life is the "outer life", at least in so far as the "impersonality" of science, so often insisted upon, means a refusal to consider how the scientific life interacts with and is affected by the lives which environ it.

There are, however, further points that must be made in the contrast between the cultural character of the lives of art and of science. The practice of the scientist, in boasting of his freedom from considerations of "value", has, it has been maintained, been the main source of his cultural weakness, meaning, as it does, his ignorance of the character of social development, his willingness to stand, in society, for no definite way of life, but to provide material for whatever interest cares to utilise him. Now, in one other respect, not hitherto sufficiently emphasised, the artist takes the more cultural attitude, that is, in not only bringing out qualitative distinctions among social activities, but in insisting upon the inescapable *struggle* between motives and activities of different character. Conflict or struggle is, of course, the essential material of the artist, and what is of importance here is that the artist, in stressing the fundamental nature of struggle, shows the possibility of a science of ethics, and the importance of ethics in considerations of social policy. Without a real struggle between the good and the bad, the cultural and the anti-cultural, ethical considerations are not of the first importance in consideration of social movement; we concentrate instead upon pretended reconciliations of opposed forces. In this respect, technical ethics, with its metaphysical and moralistic assumptions, has had the most pernicious influence upon social speculation; the tendency, dictated by metaphysics, to treat evil as unreal, as "irrational", an accident, not historically important, in fact the metaphysical playing down of the real conflict between goods and bads, makes it all the more difficult for a supporter of culture to develop a fully consistent and coherent way of life and social attitude. The usual idealistic denial of difference is carried over, of course, into the study of society, and when one is attacking the scientist for his æsthetic limitations, it has to be remembered that the professional ethical theorist is often in no better condition. But, to return to the artist, what this suggests is that when it is said, as is usual, that the artist is not concerned with moral judgments, what this may often mean is that the artist is free from metaphysics and is not concerned to palliate the struggle between goods and bads which occurs throughout society, or to work for an easy harmony and reconciliation. But the main point is this, that the artist brings out the importance of the differences of quality, and of the conflict, between ways of life, and even if he is not concerned to make the point, he makes it possible for others to see that these are ethical conflicts.

It might be thought that, amongst the sciences, psychology will present much the same materials as literature does, and facilitate the working out of a science of culture, and of ways of living. But it is precisely the failure of psychology that for the greater part of its history it has been concerned not with minds, but with "ideas", "contents", "streams of consciousness", with things that give no characterisation of mental processes at all; with problems that are not psychological, but logical and epistemological. And after a partial recovery from that, its increasing concern, in its more recent developments, with social "adjustments" of various sorts illustrates just the sort of subordination to alien interests of which the social scientists are beginning to complain, and marks the turning away, even more completely than before, from social criticism and activity. Even in Freud, who amongst psychologists is more than anyone concerned with mental qualities and relations, the note of philistinism is often apparent, and still more amongst the members of his school. For Freud himself is to a large extent concerned with the practical consideration of "adjustment" to environment; and this is especially to be noted in the Freudian tendency to treat genius (including political genius) as something requiring analysis, something to be treated in terms of maladjustment.

The considerations that have been advanced will suggest that the scientist, including the social scientist, is not on the face of it, peculiarly fitted to play any independent part in social movement. This, no doubt, is not the usual opinion, but the popular exaggeration of the importance of the scientist is, it may be argued, simply an illustration of the frequently stultifying influence of scientists on social inquiry. For it is not generally realised how the character of the scientific life may be affected by the action of quite different social motives; the popular belief is rather (and anyone with any acquaintance with scientific workers will realise that this is the "scientific" view also) that science has developed a technique of experiment and research which eliminates partiality. What, in many cases, occurs is that the superstitious compulsion which set social forms possess is reinforced by the prestige of the consenting scientist, and it is not commonly observed in these cases that taboo motives (considerations of what is, or is not, "done") are receiving, not *scientific* support, but the support of motives of the same character, though they are taken to be scientific. This is a circumstance in which the failure to consider in detail what is the character of the scientific motive or scientific life confuses social criticism. It is not difficult to see, either, that the terms "exact" and "impartial" are too vague adequately to characterise the peculiarly scientific attitude. Impartiality may be, as often as not, the operation of purely prudential motives, the fear of disturbing what is already settled; exactness (as is very often the case with "exact scholarship") may be mere old-maidishness, or more a matter of hoarding than of speculating, and not especially a scientific motive. No doubt, exactness and impartiality, in some sense, are features of the scientific life, but we need some more precise characterisation of science than this.

But what recent treatments of this whole question suggest is that scientists are not facing this problem of defining the scientific life or working out the morality of the scientist, but are preoccupied, so far as their interest in social theory goes, with social "problems". What such a book as *Human Affairs* makes plain is that the vague conception of "science" or "exact experiment" is replacing the older conception of goodwill as the universal social solvent. In both cases, it would be maintained, the reforming agencies are unimpeded by "presuppositions"—i.e., are without any demands of their own, except the demand for a just society, or for the solution of social problems. And if this is the case, what has been said about the artist would suggest that along these lines the question of the morality of the scientist would not arise, for the conception of social movement as a matter of the adjustment of demands, about the ethical qualities of which the scientist is incurious, would deprive science of any independent social standing. It would, of course, be claimed on behalf of science, as the solvent of social ills, that it avoids the criticisms most frequently brought against goodwill; for example, although it is often said that reliance upon the potency of goodwill ignores the operation of inescapable social laws, the scientist-reformer proposes to proceed by careful attention to law. What, more than anything else, confuses discussion of this last point, is the failure to realise the simple fact that most of the so-called social sciences (for example, psychology, biology or economics) are in no sense sciences of society and are incapable of establishing *social* laws. Despite the almost universal tendency of the social scientist to regard society as the material for him to work upon, this is admitted, in an obscure way, by some theorists; thus, Robbins's attack on the economic interpretation of history in his *Nature and Significance of Economic Science* amounts really to no more than the assertion that this is not a doctrine that could be established on purely economic grounds, or that falls within the scope of economics. Not that an understanding of the ways in which societies change would necessarily enable scientists to cause a society to change in any desired direction. But the point is that even if social scientists had this power, this would have nothing to do with giving to the society a scientific character, with causing the extension of scientific living within the society.

Anyone who consults such a work as *Human Affairs* will have no difficulty in seeing how the preoccupation with social "problems" affects the character of scientific life, in discouraging the criticism of assumptions, and the pursuit of an investigation to the very end. What is more to the point, however, is to indicate how any consideration of what constitutes a problem is sufficient to dispose of the pretension of an impartial scientific approach to matters of policy, and to exhibit the necessity of a more searching investigation than any social scientist can give of the social "tasks of science". The existence of a problem, we may say in the first place, involves the existence of a conflict. Theoretically, we have a problem when we are confronted by a fact or what appears to be a fact which does not seem to be consistent with something we already accept. A person who had no beliefs could have no theoretical problems. It might be said, of course, that our ignorance creates a problem for us; that when we are confronted by something the character or behaviour of which we do not know, that thing presents us with a problem. But it seems obvious that here, too, some demand of ours is involved; if our ignorance of anything presents a problem, it will be because the demands we make upon it, the expectations we have of it, are liable to be disappointed if we do not know how it invariably behaves.

Not only the person with no beliefs, but the thoroughly dogmatic person who assumed that the behaviour of the thing in question could not possibly disappoint him, the person who had not learned "to expect the unexpected", would be conscious of no difficulties or problems. It seems to be equally the case, that a person who had no demands could have no "practical" problems; the existence of the river is a problem to me because I want to be on the other side. It seems obvious that if we accepted the account of the scientist as a man without presuppositions, it would be impossible to explain how any problems or evils could arise for him. It is of interest to inquire, then, what sort of problems might arise for the social scientist. Speaking of theory, the most obvious answer would be that his problems would be the apparent existence of activities that conflicted with his social theories. This, however, is not the issue that arises here, these not being the problems in question, though reference to them in this place is useful as serving to bring out the way in which practice may hamper theory. Theoretical and practical problems cannot be rigidly distinguished since each, as we say, is a matter of obstacles to the satisfaction of demand. There can, however, be no doubt that the theoretical is a wider interest than the practical. If the function of theory is to eliminate problems by eliminating the unexpected, we should naturally want to know more about things than we should if our problems were purely practical, for as ordinary usage bears out, the *practical* consideration is the immediate or pressing or in any case the narrowly delimited. Indeed, one method of distinguishing theoretical and practical demands might be in terms of "urgency": if, at the moment, my most urgent demand is to cross the river, I am not on this occasion likely to find out much about the general behaviour of rivers.

There are other ways of eliminating the unexpected than by theorising; we can do it by living in a restricted and prudential way. And what the scientist, if he has any interest at all in the morality of science, and any affection for the scientific life, has to consider is whether the "scientific" smoothing over of conflicts, and the concern with "adjustment", is anything other than the restriction of social activity into set patterns—a restriction which may rebound upon science itself. For if, as is usually said, modern problems are due to the development of the physical sciences, it would appear that science has hitherto had more conspicuous success in creating social problems than in solving them, and this would suggest that what are commonly regarded as social evils may not, from the point of view of the scientific life, be evils at all, but merely the collision of a freer way of life with a restrictive life and narrower morality. But scientists as a rule, showing again how far below the artist they fall in their grasp of cultural development, accept the conventional characterisation of a social evil; we have "scientific" clinics devoted to a study, for example, of "domestic unhappiness", and it must be admitted that on the whole social scientists, engaged with the reform of society, present the spectacle of "prigs at play". However this may be, it is certain that unless the social scientist takes up the ethical consideration of moralities or ways of life, the problems he busies himself with will inevitably be someone else's problems, arising out of someone else's demands, and not the problems confronting the continuance and extension of scientific living. But it is precisely because he does not usually recognise this relativity of problems to demands that the scientist is so easily able to persuade himself that there is a scientific solution to the usual social problems; he does not see that in defining the problem he has already begged the question. To all this, the objection may be raised that there are certain absolute social problems which are recognised as such by anyone—those, for example, of war and unemployment. These, indeed, are much to the point, and illustrate well the question-begging procedure of this sort of thinking. For what precisely we take to be the problem of unemployment will be determined by what sort of life we are interested to promote or oppose. Hence, we find Cattell talking in the one article of the necessity of solving the problem of unemployment, and the desirability of "education for leisure"—education, i.e., as providing consolations for political and social impotence.

It has to be conceded, however, that if the scientist is lacking in his grasp of cultural movement, that is largely because of the weakness of ethical theory in the past. If it is commonly held that the scientist has no competence in considerations of "value", we have to remember that ethics has hitherto been concerned with conceptions of "obligation", "duty", "culpability" and the rest; metaphysical inventions which the scientist can see, at any rate, to be quite incommensurable with his own speculations. A metaphysical ethics can have no demonstrable or scientific connection with the actual historical activities that go on here below; and the metaphysician confines himself to empty and useless formulæ, as in the case of the Kantian imperative, or Clarke's relations of fitness, or falls back on the arbitrariness of conscience or moral feeling. Since metaphysical preoccupations and scientific inquiry cannot communicate, it is not to be wondered at that those scientists who have shown some interest in ethics, should have been driven back upon the ethics to be found in the market-place. If once it is made plain that ethics is concerned, not with some metaphysical obligation, but with criticism of ways of life, and that the scientific way of life is material for the ethical student, the main hindrance to the communication of ethics and the other sciences will have been removed. In any case, the history of science does not bear out the view that "values" are no business of the scientist. It was particularly a feature of Greek scientists, and of modern scientists in the earliest period, that they emphasised the ethical interest of their own activities and of those going on around them. The early modern scientists, we may say, by their concern with the conditions of intellectual and social freedom, contributed not a little to the form of democratic society. But, on the other hand, on the supposition of the subordination of speculation to immediate social conflicts and demands, it would not be possible to account at all for the origin and development of science as a moral factor, at odds as it has sometimes been with the prevailing morality and unconcerned with the problems confronting the dominant institutions and ways of life. It is apparent that the progressive specialisation of the sciences, and particularly the divorce of the special sciences from logic and moral theory (for which, as we say, moral theory is itself largely responsible), has assisted the growth of the utilitarian attitude in science, and has certainly led to the social enfeebling of both philosophy and the sciences.

It seems, indeed, to be the case that the importance of the social sciences has recently been insisted upon, not because these provide the materials for a science of culture and for formulating the ethic of the scientist, but on utilitarian grounds, because they especially are supposed to show us how to live. It is because the sciences of life are taken as the sciences of how to live that their claims to the predominant place in education have been much insisted upon. As Cattell plainly puts it: "The subject on which the life and happiness of everyone depends more than any other—biology—is even now only beginning to find a place in many Public Schools." Nothing could exhibit more clearly than this the self-denying conception of the function of science now prevalent. Even though others should find a certain use for biological truths, this could scarcely be the reason for the study of biology, for if a science is to arise to meet a demand, science could put up no fight at all against a social regime hostile to inquiry. But what Cattell says is plainly false. The study of biology no more promotes the "happiness" of the student than the study of Greek: if a person has scientific interests there is no more reason why those interests should be absorbed in the study of biology than in that of any other science. But, silly as such a statement doubtless is, it has the merit of a certain consistency, since this sort of scientist is prepared to treat not only other social motives, but even his own, as a neutral system of demands and his science as nothing but a technique for the satisfaction of needs.

No one who has thought about the subject could seriously put this forward, as a theory either of science or of education. To pursue a science, or to teach it, because it provides "useful information", or shows how to satisfy the individual's supposed needs, is not likely to produce any outburst of scientific genius. Rather, the view that the conditions which produce the worth-while fall within the scope of biology reaches the very limit of philistinism. As has been said, the social character of an institution is determined by the quality of the human motives which it organises and "conducts". The attitude towards science which Cattell suggests (the approach to investigation with the question, "What are my needs and how are they satisfied?") is more the morality of salvationism than of science. For if the disinterestedness which has always rightly been regarded as a feature of scientific morality means anything, it means the absence from the scientific life as such of motives of personal advantage and reward. But there is another consequence for the morality of the scientist arising out of this conception. If society hitherto has not proceeded "scientifically" on its way, we cannot believe that that is due at all to mere lack of information about fundamental needs and the technique of satisfaction. Rather, it is because society contains anti-scientific forces which are not likely to be much affected in their character by the spread of scientific knowledge. The social scientist, concerned wholly with "problems" and "adjustments" and "needs", confronted by such forces can only fall back upon exhortation and appeal; social science, in its relation to society, becomes preceptual, so that it is not a question (as the editors of *Human Affairs* would have it) of the scientist replacing the priest, but rather of the scientist assuming the priestly rôle. We are all acquainted with the sermonising proclivities of social scientists, this being one of the main sources of what popular opposition there is to science.

The scientist, if he wants to be socially active, cannot avoid this fate unless, like the artist, he accepts and welcomes the differences of quality in ways of life, and the conflicts between them, and develops a theory of culture. Doubtless, though they have this in common, the morality of the artist and that of the scientist present diverse features also. For one thing, the scientist is more closely connected than the artist with the productive machinery of a modern society, and this presents special problems in the attempt to work out a scientific morality. But it is at least something to insist that there is such a subject, that the first problem presented by the unsatisfactory position of science in modern society is not the scientific education of the public, but the ethical and æsthetic education of scientists.

THE ORGANISM AS A WHOLE AND ITS PHYLOANALYTIC IMPLICATIONS.[1]

An Organismic Approach to Disorders of Human Behavior.

By Trigant Burrow.

I.

In all departments of investigation science has dealt with intrinsic structures and their behavior, and it has considered these behavior processes in relation to the total field of which they are an intrinsic part. In the sphere of medical investigation the effort has been to establish the structure and function that is basic and consistent throughout the species as an integrated whole and from this basis to determine divergences of behavior as they occur in a particular individual or colony of individuals. It is true that from an anatomical, mechanistic viewpoint investigations of the behavior of the human organism have been carried out with equal scientific consistency. But within the domain of man's personal and social interrelations subjective factors have intervened, and the intrusion of these subjective factors has seriously interfered with the clear discrimination between reactions that are typical or consistent throughout the species and reactions that are atypical or that present divergences from an objectively established norm such as exists in other fields of science. Indeed an investigation of the reactions occurring within social groups makes evident that there is no sphere in which the body of systematized observations comprising science has been so generally subordinated to conventionally systematized prejudice as the sphere of man's behavior processes and their disorders—the sphere, namely, of man's own personal and social motivations.

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[1] Paper read at the Twenty-sixth Annual Meeting of the American Psychopathological Association, held jointly with the American Psychiatric Association, St. Louis, Missouri, May 7, 1936. A more complete statement of the material of this brief study forms a chapter in the author's forthcoming book, *The Biology of Human Conflict*, New York, The Macmillan Company, 1937.

We are all familiar with the systematized body of prejudices underlying the behavior of man as expressed in the social conflicts of political parties, religious sects and similar groups, and we are familiar with the individual and social disorders they entail—class hatreds, international disputes, inequalities of opportunity, neurosis, crime and war. These discrepancies in function that occur individually and socially are obviously expressions of divergence and conflict. But neither in the individual nor in the social group has the behavior characteristic of the human species as a whole been scientifically determined. In the sphere of our inter-individual relations neither the disorders we may observe in the behavior of a specific personality nor the disorders occurring in the wider community have yet been objectively measured and appraised in relation to the behavior that is basic and consistent throughout the species. In other words, phylobiological investigation indicates that disorders affecting human behavior have not been studied in relation to an objectively established norm. It indicates on the contrary that the reason habitually assigned by people in explanation of their mental and social reactions, whether in favor of or against one another, bears no relation whatsoever to the actual cause of their reactions—not any more than the reason assigned by the individual neurotic is the real cause of his conflict. In a word, within the sphere of man's behavior processes and their disorders, investigation offers evidence that people's habitual explanation of their behavior rests not upon a body of scientifically systematized observations, but upon a body of subjectively systematized prejudices. It offers evidence that man's subjectively systematized prejudices—his purely preceptive, inferential premises—form the social basis of those divergences which may be observed clinically in the arbitrary, wishful phantasies and hallucinations of the dissociated individual.

As these preceptive inferences have thus a direct bearing upon the problem of mental and nervous disorders, they possess a specific interest for the physician and the psychiatrist.

II.

For very many years Dr. Adolf Meyer has formulated in various lectures and writings his conception of the organism as a whole.[1] He has emphasized the need of recognizing and of dealing in practical, biological terms with the sum of the organism's various functions as these various and interrelated functions constitute, to use his own words, "the individual's total personality" or "subject-organization".[2] Dr. Meyer has at all times laid emphasis upon the concept of the personality as the totality of the functions of the organism in action and has insisted upon reckoning the individual's mental health in the light of the organism's total relation to its surrounding environment.

I think it cannot be denied that with all of us our adjustments and readjustments of outlook necessarily arise from our own particular background of intrinsic make-up as of extrinsic conditioning. It happened that with myself the application of the concept of the organism as a whole took social form. My interest in this viewpoint lay in its relation to neurotic disorders. The aspect of this conception of the organism as a whole that made special appeal to me was the possibility of its bearing upon the organism of man in its make-up and conditioning as a social community. Regarding the organism's function from this more inclusive programme of activation, human behavior may be seen in its larger affirmation and totality. The affirmation and totality of function I was led to make specific inquiry into had to do with those behavior motivations within the individual and the community that affect man's interrelations as a social unit or group.[1]

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[1] Meyer, Adolf, "Fundamental Conceptions of Dementia Præcox", *The British Medical Journal,* 1906, Vol. 2, pp. 757-759.

——, ——, "What do Histories of Cases of Insanity Teach us Concerning Preventive Mental Hygiene during the Years of School Life?", *The Psychological Clinic,* 1908, Vol. 11, pp. 89-101.

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——, ——, "The Contributions of Psychiatry to the Understanding of Life Problems", paper delivered at the celebration of the 100th anniversary of Bloomingdale Hospital, May 26, 1921. Privately printed.

[2] Meyer, Adolf, "Objective Psychology or Psychobiology with Subordination of the Medically Useless Contrast of Mental and Physical", *The Journal of the American Medical Association,* 1915, Vol. LXV, pp. 860-863.

Due to my observations in this field of man's behavior as a species, my basis of reference has undergone a marked alteration.[2] Instead of limiting my inquiry to the reactions of the single individual I have attempted to study the behavior both of the individual and of the group in relation to the behavior that is basic and consistent throughout the species as a whole, that is, the behavior that is characteristic of man's organism as a biologically integrated phylum. In this process of phyloanalysis there was the increasing tendency toward a group as well as toward an individual synthesis—a synthesis that tended to establish the consistency of the organism's behavior throughout the species as a primary organic norm beside which our individual and social divergences of reaction could be examined in their objective contrast. But I shall try to show more concretely what I mean by this.

III.

With the launching of the life of an organism as an independent individual, its behavior represents a total response within a total bionomic field of reactions. The animal that passes at birth from the enclosure of the maternal organism passes at the same time into the enclosure formed by the pattern of its group, herd or community. The organism of the new-born animal straightway finds in the bionomic configuration of its new environment a nutritive and protective matrix of common sense-impressions and motivations.

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[1] However divergent in principle, method and technique from the group investigations of my associates and myself, at the recent meeting of the American Psychiatric Association, "group-analysis", far from being wholly anathema as a psychoanalytic procedure, formed the subject of no less than five different papers.

[2] Burrow, Trigant, "Altering Frames of Reference in Relation to Man's Behavior and its Disorders", *The Journal of Social Philosophy*, 1937, Vol. II.

With the human organism, however, its natural passage from the parental envelope into the total behavior configuration that primarily integrates the group or phylum is largely intercepted.[1] The organism's total or primary configuration is early deflected into the socially constructed system of partial reflexes we know as man's code of signs or language—a system of responses to which the organism has become verbally conditioned. So that in the human organism its primary process of adaptation undergoes at the outset a secondary deflection. Instead of the infant's passing spontaneously into the primary integrative unit characteristic of its species, the human organism becomes secondarily assimilated into the adventitious system that forms its mental and social medium of interchange. That is, a partitive, symbolically reduced model of the organism's behavior—a greatly diminished replica of its primary pattern of action—is substituted for the organism's behavior as a whole. As an example, in the word "swimming"—in the vocal or motor pronunciation of the word—the organism experiences a miniature form of actual natation.[2] Indeed we do not half realize the degree in which our words represent *actual behavior* partitively performed within a circumscribed segment of the organism. This mimic pattern of action circumscribed within the organism's symbolic segment and operating socially or inter-individually among us tends more and more to encroach upon the organism's total behavior configuration. Thus, through the accidents of his evolution, man now tends to function within a miniature behavior system which, in its overt expression, automatically replaces the larger system of behavior governing his organism as a species or total configuration.[1] With the gradual interpolation of this new integrative arc or ambit and with the corresponding subordination of the primary behavior ambit or configuration that motivates the organism as a whole, the individual becomes equipped to enter the social group whose responses have now become largely conditioned to verbal or symbolic stimulation.[2] He enters a group whose encircling, protective environment is now fashioned of those secondarily integrated reflexes that constitute for the growing organism the mere signs and intimations of things. In short, as a result of his early training, the child is enveloped not so much within a spontaneous field of total, bionomic reactions as within a field of vicarious symbols that more and more replaces his total relation to the total world of objective actuality.[3]

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[1] Burrow, Trigant, "The Preconscious or the Nest Instinct—A Genetic Study Based on the Dynamic Psychology of Freud", paper read at the Seventh Annual Meeting of The American Psychoanalytic Association, Boston, May 25, 1917.

[2] Paget's thesis furnishes an excellent clue to the reduced models of behavior the organism expresses through phonation or articulation. (Paget, Sir Richard, *Human Speech*, New York, Harcourt, Brace & Co., 1930. For a brief version see article by the same author, "The Origin of Language", *Psyche* (London), 1927, Vol. VIII, pp. 35-39.)

IV.

It was the common experience of all of us that at a certain age—at the age of two or three years—having, through our nursery training, become adept in the use of certain symbols, certain social meanings or behavior conditionings and their attendant prohibitions, we were permitted to enter the larger home circle and to take our place at the family table. In being absorbed thus into the family unit, we were admitted into what is for the individual his first symbolically systematized social group or community.

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[1] The gradual dissipation of the organism's total basis of behavior is recognized by various psychologists. Kurt Lewin says that "the child, to a greater extent than the adult, is a *dynamic unity*. The infant, for example, acts first with its whole body and only gradually acquires the ability to execute part actions. The child learns only gradually to separate out voluntarily certain parts of its environment, to 'concentrate' ". (Lewin, Kurt, "Environmental Forces", *A Handbook of Child Psychology*, Second Revised Edition, Edited by Carl Murchison, Worcester, Massachusetts, Clark University Press, 1933, p. 619). This view is directly in line with the embryological findings of Coghill.

[2] The extent to which the organism's feeling and thinking reaction as a whole has been transferred to the symbolic segment is illustrated by the following quotation from Piaget: "Stern noticed that his four-year-old daughter confused thought with the voice. She said expressly that we think with the mouth and tongue. This spontaneous remark of a child gave us the idea for a systematic inquiry on this point. We asked sixty children between the ages of four and twelve what one thinks with, and whether one can see and touch thought. The results of this inquiry were very clear. All the children under about seven answered, like Stern's little girl, 'we think with our mouths'." Piaget, Jean, "Children's Philosophies", *A Handbook of Child Psychology*, Second Revised Edition, Edited by Carl Murchison, Worcester, Massachusetts, Clark University Press, 1933, p. 534.

[3] Burrow, Trigant, *The Structure of Insanity—A Study in Phylopathology*, Psyche Miniature Series, London, Kegan Paul, Trench, Trubner & Company, 1932.

Here at the family table the process of the organism's bionomic weaning grows apace. With the substitution of a partitive pattern of action that henceforth employs only the signs and tokens of behavior there develop concomitantly the mere signs or tokens of *feeling*. Thus our verbally conditioned affects—those symbolic motivations that are a mere charade of the organism's primary, total behavior—more and more replace, overtly or socially, those native behavior configurations which first integrated the individual as a total organism within the organism of the total group or phylum.[1] This diverting of the infant organism from the total action-pattern[2] that forms the primary basis of behavior in the individual and the phylum, and its substituting, instead, a partial pattern to which the organism is reflexly conditioned through the use of words or symbols epitomizes the behavior adaptation of civilized individuals and communities throughout the species.

The family table, then, with its secondary, artificial conditioning is not a remote or esoteric innovation. The family table is a social institution and presents an immediate and internal social problem. The codes and promulgations, the conditioning symbols and psychological meanings in which it abounds are not distinctive for any particular family. They are equally characteristic and equally rigid for the family next door, the family across the street, for families in the rest of the block and in like blocks throughout the city, as throughout like cities and like communities the world over. What is canonical in the pattern that forms the social unit of one family is canonical for families everywhere. In short, the adjustment which the organism of the child undergoes in early infancy is the biological prodromal of those individual and community patterns of alteration which characterize the community generally and which, from the point of view of our obligation as students of behavior disorders, should be seen as characterizing ourselves in particular. So that the phylogenetic and internal significance of our problem hardly requires emphasis.[1]

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[1] Burrow, Trigant, "Physiological Behavior-Reactions in the Individual and the Community", *Psyche* (London), 1930, Vol. XI, pp. 67-81.

——, ——, "The Morphology of Insanity as a Racial Process—A Study of Attention in Relation to Adaptive Disorders", *The British Journal of Medical Psychology*, 1933, Vol. XIII, pp. 296-312.

[2] Coghill, G. E., "Individuation versus Integration in the Development of Behavior", *The Journal of General Psychology*, 1930, Vol. 3, pp. 431-435.

——, ——, "The Structural Basis of the Integration of Behavior", *Proceedings of the National Academy of Sciences*, 1930, Vol. 18, pp. 637-643.

——, ——, "The Biologic Basis of Conflict in Behavior", *The Psychoanalytic Review*, 1933, Vol. XX, pp. 1-4.

——, ——, "Integration and Motivation of Behavior as Problems of Growth", *The Journal of Genetic Psychology*, 1936, Vol. 48, pp. 3-19.

What needs to be emphasized is the circumstance that, within the home circle or at the family table, the child becomes more and more enmeshed within a reflex system of conditioning verbal images.[2] He becomes gradually trained to manipulate those partial (affective) patterns of reaction that form the signs and signals of behavior in place of the organism's behavior as a total pattern of action.[3] Because of the secondarily conditioned pattern of responses inculcated at the reflexly integrated family board, the immature individual builds up a definitely mimeographic, symbolic behavior system that is partitively motivated, and through this affectively distorted mechanism he substitutes a mode of behavior that is not primary or typical but that increasingly diverges from the mode of behavior that is basic and consistent throughout the species as a whole.

It must not be thought that I wish to abrogate the use of symbols—that I have any desire to render man mute and inarticulate. Quite the contrary, my interest is precisely in man's greater facility in the use of this reflexly induced symbolic pattern of communication through his reintegrating it within the organism's primary pattern of behavior as a whole. Although in our very effort to reckon internally with man's behavior in terms of internal physiological alterations we are at this moment employing the symbol, the symbol we are employing is merely an inter-individual code and is therefore not primary as an agent for motivating and sustaining the organism's total behavior as a species. But due to the effect-coloring it has acquired, the symbol now represents an unrecognized process of social conditioning that has been induced within the phylum through the inception of man's mimic phonation or language. This process, recapitulated ontogenetically in the nursery and at the family table, induces in the child an inter-individual pattern of behavior that now functions vicariously, verbally, as the dominant motivation of the organism's behavior as a whole.

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[1] Galt, William, *Phyloanalysis—A Study in the Group or Phyletic Method of Behaviour-Analysis*, Psyche Miniature Series, London, Kegan Paul, Trench, Trubner & Company, 1933.

[2] Burrow, Trigant, "Altering Frames of Reference in Relation to Man's Behavior and its Disorders".

[3] Burrow, Trigant, "Fallacies of the Senses", *"Scientia"*, 1935, Vol. LVII, pp. 354-365, 431-441.

V.

Accepting this unit of the family table as the basis of reference in the determination of individual and community behavior, I attempted along with my associates to establish a more or less stabilized group-table or "family board" replete with all the conventions and paraphernalia to which each member of the unit was "born and bred". For fifteen years we met, according to Hoyle, three times a day, but with a very different aim from that imbued by the dominating social pattern of interchange to which we had been severally conditioned at the parochial family table. Our purpose was that of applying a method of objective inquiry to reactions and processes which we had until now accepted subjectively at their face value. It was our effort to apply controlled observation to processes hitherto tacitly accepted as the *bona fide* pattern of social interchange, namely, the pattern of secondary, inter-cortically conditioned responses that now everywhere govern human behavior. With a view to relating the behavior of the organism to reactions that are typical and consistent throughout the species, this conventional social unit has daily adhered throughout these years to the consistent study of itself and its prevailing postulates regarding the accepted motivations determining human conduct. The result has been the increasing evidence that the basis of motivation in the individual and in the community, as inculcated at the family table, has inadvertently created a reaction consensus or social institution that calls for definite reckoning and adjustment on the part of students of behavior. This social reaction consensus calls for reckoning because of its divergence from a system of totally integrated reactions that are basic and consistent throughout the species.

At the very outset, then, there occurs a disturbance socially in the personality's "subject-organization", to use Dr. Meyer's very apt term.[1] From the point of view of the organism's total behavior there is created an artificially circumscribed identity-constant or self-summation that becomes increasingly separated from the self-summation or identity that is primarily integrated within the organism's total configuration as a phylum. In a word, from the beginning of the organism's development as a separate entity, its behavior is modified or adjusted in respect to two integrative systems of reaction, and due to the influence of these two systems of behavior man's subject-organization or personality-summation is now represented by two distinct reaction systems or *personae*. These consist on the one hand of the *persona* with which the individual is invested by the family group and which constitutes his symbolically integrated or partitive "I", and on the other the *persona* that represents the organism's primary endowment and constitutes man's totally integrated or generic "I".

A thesis that deals with the phylogenetic nature of behavior disorders and with our own necessary involvement in behavior implications affecting man as a race presents a field of inquiry which, I believe, calls for careful consideration. For under conditions which permit a laboratory study of the behavior of the individual or element in relation to the pattern of behavior that is basic and consistent for the species, it may be demonstrated that the individual has become integrated into a personality or identity-centre of motivation that is not governed by the organism's behavior as a whole, but is on the contrary entirely conditioned to the external word or to the organism's reflexly conditioned symbol-pattern of response. In place of the organism's total personality or the individual's "subject-organization", the student of behavior, like every other individual, has himself become integrated into a socially systematized *persona* that is only symbolic or pseudo-motivated. Because of our training in the use of the symbol or the word, we ourselves have been rendered continuous with this acquired pattern extending throughout the social environment.

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[1] See "Objective Psychology or Psychobiology with Subordination of the Medically Useless Contrast of Mental and Physical".

This ontogenetically and phylogenetically created centre of personality—this pseudo- or ego-genic *persona* artificially inculcated in the individual and in the community—becomes separated or dissociated as a social phenomenon from the organic configuration of the species in its behavior as a whole. This restricted behavior pattern characterizing the individual and the community becomes dissociated from the organism as a whole precisely in the degree in which the organism of man has become secondarily knit into this artificial plexus of partitive or socially conditioned behavior reactions. Because man is necessarily self-enveloped in configurational alterations which are internal to himself as a race or phylum, he little realizes the extent to which the word, or rather the symbolically articulated system of behavior that produces the word, intercepts the immediate and spontaneous contact of his total reaction-system with the total and immediate environment about him. He little suspects the degree to which the interest naturally uniting his organism as a whole to the whole object before him is deflected into mere word-affects or part-functions.

While it goes without saying that our experimental table unit was made up of intelligent, educated, well-intentioned individuals, it was no simple matter to bring to book this table d'hôte of behavior into which one is inducted during early nursery days. For it was the automatic tendency of every student to employ the symbolically motivating pattern of the partitive *persona* and to shy away from his self-allotted task as an element in a primarily integrated unit or social group. Each student, for example, being activated by the partitively conditioned *persona* or ego-constellation of his early childhood rather than by the organism's totally integrated pattern of motivation, would invariably respond with the reflex, mimic reaction of his miniature or lesser behavior system. With unerring fidelity to this symbolic, this ego-genic or I-begotten pattern of behavior the entire group, becoming inter-individually or socially stimulated to this reflex, partitive pattern of response, would faithfully reproduce the organism's secondary, nursery pattern of reaction and present, in general, its early partitive or family-conditioned ambit of behavior. The result was all manner of reactions patterned upon the "normal" criteria of behavior—personalism, sentimentality, competitive righteousness, irritability, efforts to know more than others or to curry favor, and so on and so on. In short, there was presented the organically negative *dis*function or part function expressed in the merely exteriorized, symbolic reaction of "good" or "bad" conduct, wholly regardless of the integrity of function that motivates the organism's reaction as an integrated whole. In fact there was exactly the same *mis*behavior within this table unit and within subsequently formed groups as at the early family table at which each member of the group had originally become socially conditioned. And this notwithstanding that within a total phylobiological frame of reference it is quite inconsequential whether the "misbehavior" is socially credited as "good" or discredited as "bad".[1]

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[1] Burrow, Trigant, "Crime and the Social Reaction of Right and Wrong", *Journal of Criminal Law and Criminology*, 1933, Vol. XXIV, pp. 685-699.

VI

But it must not be thought that I am indicting any particular group. On the contrary I must here emphasize the circumstance that we who are physicians and psychiatrists are by no means strangers to the social process I have indicated. The miniature or microgenic pattern of behavior substituted in childhood for the larger macrogenic configuration of the organism as a whole is to-day the pattern or configuration that prevails, overtly, throughout the adult behavior of us all. For the early family group is but the paradigm of adult group organizations the world over. In the social constellation, therefore, in which we as students of behavior disorders find ourselves, we are not detached investigators dealing with remote intellectual statistics, sociological or otherwise. We are not confronted with some phenomenon entailing a distant, prehistoric or paleontological tradition. We who are students of behavior are ourselves the material with which we are ourselves attempting to deal. The early nursery group of each of us was but the rudiment of the social group in which we find ourselves to-day. The process which for the individual as for the race constitutes the *faux pas* of our childhood, namely, man's reflexly or verbally conditioned deviation from behavior reactions that are basic and consistent throughout the species, must now become the problem of man's adult life both as an individual and as a race. The fact must be faced that the partial or reflex ambit of behavior into which we were early initiated as children is reflexly still the organism's dominant pattern of reaction, and in contrast to the organism's primary motivation still dominates our behavior reflexly no less in the moment at hand.

It would seem that we do not at all recognize how completely our interest and motivation rest now upon a basis of integration that conditions the organism's reactions secondarily, partitively or *inter*-individually. We do not at all recognize that in the process of the child's early social conditioning he derives his symbols solely from other people, and that in deriving his symbols from other people or upon an inter-individual plane of reaction he also derives from other people the partitive, inter-individual type of interest or motivation that adheres to the symbol.[1]

This inter-individual mechanism introduces a bionomic reaction pattern that is very different from the primary reaction pattern that relates the organism as a whole to its immediate object. As I have said, there are behavior reactions that are typical and consistent throughout the organism (phylum) as a whole, and in contrast to these typical reactions there may be seen the quite arbitrary behavior reactions represented in the individual's or the community's merely preceptive, autocratic, fanciful inferences or wishes. Our experiments with group units indicate that man's typical reactions are those that are motivated under the supremacy of the organism as a whole, whereas the organism's atypical reactions — its inter-affective, miniature responses — are motivated under the domination of the symbolic, partitive mechanism of adaptation, and therefore always pertain to man's miniature, inter-functional or inter-individual ambit of behavior. Accordingly, it is the organism's primary, typical, *intra*-functional reactions with which we find correlated man's basic and consistent bionomic behavior or the sphere of his objectively systematized observations; while it is the secondary, atypical, *inter*-functional or symbolic system that is found answerable for man's partitive disorganizations and inconsistencies or the sphere of his subjectively systematized prejudices. The effect organismically and therefore socially of this bio-physical shift of motivation from the organism's primary *intra*-functional pattern of integration into the symbolically contracted, *inter*-functional segment of motivation possesses for us as students of behavior the deepest biological and sociological significance.[1] This significance is due, as I have said, to the circumstance that man's prevalent inter-individual, microgenic reactions (his wishful, partitive inferences and motivations) constitute the social basis of those divergences of behavior to be observed clinically in the aberrations and disorganizations of the psychoneuroses.

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[1] Consider the broader biological significance of the "transference" in the light of our inter-individual social images, and the contrast of these partitively motivated reactions with the primarily integrated motivation of the organism's behavior as a whole. (Cf. Burrow, Trigant, "Social Images versus Reality", *The Journal of Abnormal Psychology and Social Psychology*, 1924, Vol. XIX, pp. 230-235, and "The Problem of the Transference", *The British Journal of Medical Psychology*, 1927, Vol. VII, pp. 193-202.)

The task, then, of the medical community as of other communities is to realize the degree in which the primary behavior of man has become secondarily decentred. It is urgent that we recognize to what extent man's processes have become over-symbolized partitively, affectively, and how seriously these substitutive symbolic processes of man now stand in need of an organic decoding. This process of decoding calls for a recentring of the organism's behavior that will enable us as a group, community or species to reassert our primary motivation as total spontaneous organisms. This means recovering the primacy of the organism's physiological behavior as a phylum. It means repudiating the inter-individual, miniature affects and affectations that now secondarily motivate man's conduct, and on the other hand it means delegating to the word or verbal image the partial, ancillary rôle appropriate to it as a mere social code. Man's verbally or socially articulated behavior is very different from the total articulate behavior of man's organism as a phylum. In short, the behavior that translates itself into mere verbal symbols or words performs a very different function from the actual behavior that behaves.

Being ourselves involved in a behavior alteration that is internal and endogenous to us, it is required that we approach this alteration as a process that is native and internal to our own organisms. We may not readjust or correct this internal alteration by applying to it the symbolic method of the

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[1] Syz, Hans, "The Concept of the Organism-as-a-Whole and its Application to Clinical Situations", *Human Biology*, 1936, Vol. 8, No. 4.

Burrow, Trigant, "The Law of the Organism—A Neuro-social Approach to the Problems of Human Behaviour". To be published in *The American Journal of Sociology*, 1937, Vol. XLI, No. 4.

verbally conditioned intellect as though this internal alteration were some remote adventitious behavior-disorder. For the anatomical machinery or mechanism of our inter-individual word-formation which has its seat within the partitive, symbolic segment has set up a behavior mechanism among us inter-individually that tends to short-circuit and obstruct the behavior motivation of the phylum as a primary physiological organism. This primary behavior pattern, with its totally integrated systems—respiratory, vasomotor, circulatory, and cerebral—is and must remain the primary, dominant motivation of man's behavior.

If we are to maintain a basis that is objective at the same time that it is internal, and thus acquire a consensual and effective sense of tensions and alterations that are internal to ourselves—if we are to acquire an internal sense of an aberration in our behavior that contrasts with the consistent behavior of the organism as a species or phylum, we shall have to recognize that in our habitual approach to behavior disorders we employ symbols to describe a physiological condition quite as though these symbols, with all the affect-reaction they embody, were the condition itself rather than the mere symbolic description of the condition. This is important. For, if we are constantly employing such symbols and psychological meanings, and our symbolic usage represents throughout the community an unrecognized lapse in feeling-perception, our behavior has become the expression of a *social equation* that is comparable to the personal equation of the astronomers. For we are faced with an error in internal "refraction" which we must constantly "correct for" if we are to secure ourselves against this organismic inconsistency in our own momentary reactions.

VII.

In view of the trend of investigation I have here outlined I have been led to regard the problem of nervous disorders and insanity, along with man's maladaptations of behavior generally, as primarily a problem in the adjustment of divergent neuromuscular patterns of reaction. These divergent patterns have been forced into conflict with the total organismic configuration that primarily motivates the individual and the community. Because of the demonstrable correlation between our personal and social disorders of adaptation and these divergent tensions and alterations perceptible within the organism, I have been led to the view that an effective approach to the problem of behavior disorders calls for the adoption of a definite technique on the part of students of behavior that will permit an objective discrimination between these tensional patterns and configurations internal to the organism. More and more our group units have afforded us the opportunity to observe the presence of tensional alterations that affect the organism's immediate bio-physical processes. It became gradually evident that the conflicts and discrepancies expressed outwardly in man's disorders of behavior were due to an interference between coincident neuromuscular patterns of reaction internal to the organism, and that the essential conflict underlying our behavior disorders is caused by an overlapping and discrepancy between these two basic, internal reaction fields.[1]

Apparently the physiological behavior configuration determining the primary behavior of man as a race or phylum —a configuration that is susceptible of practical test by any research group employing the appropriate technique—is objectively appreciable within the organism by reason of the difference between the physiological pattern or design of this larger behavior configuration and the pattern or design characteristic of the organism's lesser or symbolic behavior ambit. As we know, the design or figure that is characteristic of a physiological pattern and that constitutes an integral element within that pattern is decisive in determining the physiological design of the pattern or configuration as a whole. Stimulating this configural element stimulates the configural design integral to the physiological pattern throughout.

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[1] Burrow, Trigant, "Neuropathology and the Internal Environment—A Study of the Neuromuscular Factors in Attention and their Bearing upon Man's Disorders of Adaptation", *Human Biology*, 1935, Vol. 7, pp. 74-94.

Touching off the first link in the total physiological design excites the entire chain of elements composing the pattern. It happens that the pattern that motivates the behavior of the organism of man as a total phylum is plainly discriminable from the partial pattern of man's secondary adoption located within the partitive or symbolic segment. These two patterns are discriminable from one another because of a conflict between the integral figures that takes place at their point of juncture.[1] This point of juncture and its attendant conflict may be detected especially in the zone of the eyes because of the dual relation of this zone or segment to the total and the partitive reaction systems. According to the dominance of the configural design, the function of the eye-movements is very different in the two patterns. That is, the two integrative arcs or ambits present a different configural design according as the movements of the eyes occur in relation to the pattern of behavior of the organism as a whole or in relation to the configurational pattern that motivates the organism in its partitive, symbolic adaptation.[2]

The restoration, then, of the sovereignty of the organism as a whole through recentring its primary basis of motivation is not a mental or symbolic problem, and its solution will not be attained upon a mental or symbolic plane of inquiry. The disturbances we see outwardly expressed in the maladaptation of individuals and of groups entail a physiological alteration in the organism's behavioral motivation as a whole, and its readjustment cannot be accomplished by means of the partial, micronomic system of behavior mediated inter-individually through the symbol. We are confronted with a behavioral disorganization that may become actually appreciable only in the conflict of internal strains and tensions that constitute its actual seat.

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[1] In this connection the experiments of Jacobson are interesting, especially his experiments relating to relaxation of the eye-muscles.

Jacobson, Edmund, *Progressive Relaxation*, Chicago, University of Chicago Press, 1929.

——, ——, "Electrophysiology of Mental Activities", *The American Journal of Psychology*, 1932, Vol. XLIV, pp. 677-694.

See also Schultz, J. H., *Das autogene Training*, Leipzig, Georg Thieme Verlag, 1932.

[2] Burrow, Trigant, "Behavior Mechanisms and their Phylopathology", *The Psychoanalytic Review*, 1935, Vol. XXII, pp. 169-181.

See also "Altering Frames of Reference in Relation to Man's Behavior and its Disorders".

VIII.

In this procedure it is indispensable that the student have recourse to the direct observation of his own organismic sensations. But at least I can offer in verbal terms some hint of the effective technique to be employed in the effort to eliminate the internal conflict of tensions underlying our neuroses, individual and social. But even this hint presupposes the reader's recognition that socio-analytic observations are a prerequisite to our internal tensional definitions. Within this socio-organismic setting the initial technique which has proved of greatest assistance in the experimental work of the individual and the group consists in arresting the usual process of attentive fixation. Instead of attending to the image as projected mentally, the method consists in concentrating upon the tensional pattern or configuration that is the physiological basis of the attentive act. This procedure involves the experimenter's facility in maintaining the eyes in a consistent position of relaxation or in the position normal to the eye when not engaged in symbolic or projective attention—the position probably most nearly approximated in the period immediately preceding sleep. The increasing sensitivity to and awareness of this primary tensional configuration and its contrast to the secondary tensional configuration prevailing in symbolic attention readily leads to a capacity of differentiation between them. The observation of an objective demarcation between these two internal patterns of reaction and the concomitantly progressive elimination of conflict within the field of the organism's behavior have naturally led to our setting aside the symbolic or mental factors commonly assigned as the causative element in neurotic disharmonies. They have led to our shifting emphasis from the organism's miniature or inter-individual segment of behavior and to our placing it instead upon the organism's immediate, internal behavior configurations.

These considerations make pertinent an extension of the conception of the organism as a whole as well as of the relation of the individual as a totality to the surrounding environment. They enable us to contribute materially not only to the conception of but to the harmonious integration of that complex of interrelations, "including the respiratory and vasomotor and circulatory and cerebral activity",[1] that has been summed up and described by Dr. Meyer as the personality's "subject-organization". We are enabled to regard the system of behavior reactions comprised under the individual's subject-organization as a unitary complex of functions or, to paraphrase Coghill, as a totally integrated pattern of action whose function is primary and sovereign in relation to the systematized functions represented in the organism's secondarily conditioned reflexes.[2] This subject-organization or total reaction pattern is, however, not confined to the individual, but represents a configuration that is inseparable in implication as in function from the organism of man as a race or phylum. With this phylogenetic extension of the personality's subject-organization, or of the organism's integration as a whole, students of behavior are in a position to approach with practical efficiency those subject-*dis*-organizations and *dis*functions which are observable as anomalies of behavior affecting individuals and communities in their wider bionomic relations. In this biological expansion of the conception of man's behavior processes, research into behavior disorders will include in its function the organism's phylogenetic as well as its ontogenetic maladjustments. Accordingly, the physician occupied with behavior disorders will be enabled to deal directly with divergences or impediments in the subject-organization or total pattern of configuration not only of the individual, but of our wider human communities.

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[1] Meyer, Adolf, "The Value of Psychology in Psychiatry", *The Journal of the American Medical Association*, 1912, Vol. LVIII, pp. 911-914.

[2] See note 2, page 265.

Cf. also Goldstein, Kurt, *Der Aufbau des Organismus*, Der Haag, Martinus Nijhoff, 1934.

THE IMMEDIATE PAST IN PERCEPTION.

By Q. B. Gibson.

The problem which I want to bring forward in this article is one that arises naturally when the ordinary man begins to reflect on his relations to his surroundings. As an ordinary man, for example, I perceive a man with an axe over on the other side of a valley. I have a direct visual perception of the axe striking the log, and in having this I unquestionably assume that this event in the material world is contemporary with my act of perceiving it. But when I am asked to explain the curious fact that I perceive this event, I recall the physics I learnt in my youth, and say that light-waves have proceeded from the thing in question, and have affected my retina and nervous system in some especial way. This assertion clearly involves that the event perceived is *antecedent* to the perception of it. Here, then, at the very beginning of my perceptions, I am caught making incompatible statements. On the one hand I am saying that certain events occur in the *present,* on the other I am saying that they have occurred in the *immediate past.*

There are of course more obvious cases of the same thing. A full second after I have the direct visual perception of the axe striking the log, I hear a sharp sound. I do not hesitate to say that there *is* this interval of time, and yet I do not hesitate to say that the sound is the sound of the axe striking the log. I explain this apparent contradiction by saying that the sound-waves have a very much smaller velocity than those of light. If I choose to go further afield, I think of the relation of thunder and lightning; and, again, I am actually told by the astronomers that some of the stars I see perished many years ago.

Here, then, we have a problem presented to us by common sense. I think it will be found that it is a problem which remains, even when common-sense assumptions have been accurately stated, and turned by philosophic criticism into a theory of perception. There are, it seems to me, theories which can be criticised for not having removed the incompatibility I have mentioned, and there are others which have been considerably influenced by the necessity for removing it.

My purpose in this article is not to uphold any particular theory of the perception of the external world. It is merely to consider the requirements which any theory must fulfil before it can be quite rid of the stain of asserting that perceived events occur both in the present and in the immediate past. I will proceed by stating first as clearly as possible the propositions which conflict, and will then go on to consider in what way the conflict may be avoided.

It is clear that the conflict arises from the fact that the perceptual situation is looked on from two different points of view, which I propose to call the cognitive and the causal points of view. It is supposed that we are considering two entities—a percipient mind and a particular grouping of material things. Between these two entities there exist two different types of relation. There is on the one hand a cognitive relation, expressed by saying that I perceive the axe striking the log. On the other hand there is a causal relation, expressed by saying that there is a causal chain of events beginning with the axe-striking-log and ending with the perceptual process in the mind. The cognitive relation is regarded in a naïvely realistic way. That is to say, the objects which I perceive are the material things themselves which coexist with me as percipient. As such they are regarded as contemporary with my act of perceiving them. On the other hand the causal relation is regarded as one in which the cause is antecedent to the effect. Thus the accounts given of the two different sorts of relation between material things and percipient minds are such that they cannot possibly both be true.

I do not think anyone will want to question the fact that the temporal nature of the cognitive and causal relations is of the sort here stated. Whatever account of the cognitive relation you may give, it remains true that there is something objective perceived by you, which is contemporaneous with your act of perceiving it. It is clearly not possible to prove this; to do so would be like giving a definition of time. All I can say is that if anyone wants to challenge it, he is at liberty to do so. On the other hand it seems that a causal relation cannot take place without a transition in time between the first event and the second. This may not be so clear in the case, say, of one billiard-ball hitting another, but it becomes clear if we consider a series of causes and effects. The longer the chain of causes and effects becomes, the clearer will be the difference in time between the first cause and the final effect. There is thus an important difference between cognition and causation in respect of their temporal characteristics, and it is this which lies at the bottom of the whole difficulty.

A further point which should be cleared up at once is that concerning the use of the words "material thing" and "event". When I propose the dilemma about the present and the immediate past in perception to non-philosophical acquaintances, the invariable answer is that a great fuss is being made about a very small matter, and that it doesn't make much difference anyway. The assumption is of course that a material thing endures, and that a fraction of a second is therefore hardly worth worrying about. But it must be remembered that, although material things endure, they are also constantly changing, either in position or in shape or in some other respect. For example, a fraction of a second will make a considerable difference in the relative positions of the axe and the log. It is therefore important for us to consider our cognitive and causal relations to these material things at a particular moment of their existence. This is why I have in some places spoken of "groupings of material things" or of events, rather than simply of "material things".

I do not mean to imply any such metaphysical view as that things are resolvable into events. I am merely taking the things as they exist at any instant. It is in connection with these that the dilemma occurs.

Now it seems that the two incompatible accounts given of the two different sorts of relation between material events and percipient minds are in fact found together in at least one much discussed theory of perception—that which is generally called *naïve realism*. Such a theory holds that the contemporary object perceived is nothing but the material thing itself. And as the material thing, to be a material thing, must be part of a causal order, the theory naturally includes a belief in physical and physiological causation. The theory is simple and attractive; but it has always been recognised that its great difficulty lies in the explanation of illusion. When we point to its incompatible assertions concerning time relationships, we are really doing no more than elaborating one branch of this difficulty concerning illusion. But it seems to be an important branch with peculiar problems of its own, and hence it is worthy of separate consideration.

Before continuing, I must point out two underlying assumptions which I will not attempt to question in this paper. They are both taken for granted in my statement of the two incompatible assertions, and underlie the theory of naïve realism in which these assertions have been found to be embedded. The first is that there do exist material things independent of my act of perceiving them or of any other process of my mind. This is the general assumption for a realist theory of perception. Without it, the problem which I have brought forward would admittedly not exist. For unless we assume the existence of independent material things, causal relationships and cognitive relationships will not remain on the same level. The fact that the mind is cognisant of certain objects will be primary. Causal relations will merely exist among these objects, uniting them into a coherent whole. The mind stands apart from this causal order, and therefore there is no causal relation which can conflict with the cognitive one. Despite this happy situation, however, I consider it is important on other grounds that a realist theory of perception should be maintained, and before abandoning it, it would be well to see if we cannot remove its inconsistency.

The second underlying assumption is that there is something *"given"* in perception. In speaking of "seeing", "hearing", etc., we have assumed that there is something of which we have a direct conscious awareness. It is for this something that the word "sense-datum" is used by many modern philosophers, notably Professor Price in his recent work on perception.[1] It is important that we should be aware of this assumption, for on it is based the view that the object cognised is contemporary with the act of cognising it. The assumption has been denied on the ground that our conscious perception of the external world is a question not of awareness but of belief. It is held, for example, that we are not conscious of colour patches and spatial perspectives, but that our consciousness consists of a belief that there is, say, a book, so-and-so coloured and so-and-so placed, and we cannot define the colours and perspectives except in terms of this perceptual belief about the book. On such a view our problem would indeed vanish. If our perception of the world around us were just a matter of interpretation, without anything being directly given to us, it would be foolish to speak of the object of our perception as being contemporaneous with our perception of it. I do not, however, intend to consider this way out of the difficulty at the moment, partly because it is on the face of it difficult to see how there can be perceptual beliefs without there being some immediately experienced objects about which we entertain the beliefs, and partly because I wish to limit the discussion.

Now that practicable limits have been put to the discussion, I propose to consider how, given these limits, the incompatibility can be removed. Let us first attack the *causal* assumption, viz., the assumption that there is a causal relation between the material event and the mind's act of perception.

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[1] H. H. Price, "Perception".

We might do this by pointing out that even naïve realism does not necessarily lead us to maintain such a causal relation. Naïve realism, though it involves the causal efficacy of the thing perceived, does not necessarily involve any system of universal causation. In particular it does not necessarily involve the causal efficacy of the thing perceived *on the percipient*; and it is this—not causation in general—which is maintained by our causal assumption. It might be maintained then that the assumption may be avoided if we adopt a dualism, in which on the one hand there is a directly perceived causal world, and on the other hand the percipient minds. Causation may be universal except for the break between minds and things. On the basis of the direct givenness of things we may learn of the causal effect which one thing has on another; in particular, of the effect which an object in the environment has on the cerebral cortex. But no such causal process can touch the percipient mind with which this cortex is generally regarded as related. It belongs to an entirely different realm.

This parallelistic denial of psycho-neural causation is conceivable enough, but as far as we are concerned it is irrelevant. It does in fact bring no real relief from the temporal difficulty, because it does not avoid what is essential in our causal assumption. The part of the assumption that matters is that there is *physical and physiological* causality, and if this is granted its upholder need not worry himself greatly about the question of psycho-physiological causality. The reason is this. The brain-event which is caused by the material event must still be conceived as occurring *after* that event. And on the other hand the mind-event, in running parallel to the brain-event, is clearly meant to have some definite fixed time-relation to it. Suppose this time-relation is one of simultaneity. Then the mind-event in which the material thing is directly perceived would take place when the thing is already in the past, and we have the old discrepancy. Further, the situation is not improved if the mind-events occur regularly at a certain period before or after the brain-events. For the important point is this. The mind-event has a fixed time-relation (contemporaneousness) with the material event which is directly perceived. It also has a fixed time-relation (fixed in some pre-established way) with the brain-event. And, according to an adaptation of Euclid, two events which have a fixed time-relation to the same event, ought to have a fixed time-relation to one another. But material event and brain-event have no fixed time-relation. They only have one which is dependent on the distance, and on the speed of transmission between the two. This is just the old discrepancy in another form. The single pre-established jump of parallelism is not really sufficient to break down the significance of the causal assumption as a basis to our problem. The dirty work has already been done by the causal chain of events which precedes the jump.

Thus the attack on the causal assumption has been repulsed, though in the process the assumption itself has had to be refined. If the material thing is to be a material thing, it must be allowed that it may have a causal effect on the brain. More is not required.

It remains for us to attack the cognitive assumption, viz., the assumption that the material thing itself has a relation of direct contemporary givenness to the percipient. We have agreed not to question the fact that there is *something* given to the percipient; and we have maintained that this something is inevitably taken as contemporary with the act of perception. There seems then to be only one obvious line of attack, and that is to deny that it is the material thing which is directly given. Such a denial would mean that the sense-datum and the material thing were distinct entities, though they would be related in one way or another. Taking this view we would say that on the one hand there is a causal relation between the material thing and the act of perceiving (or its corresponding brain-event), and on the other there is a cognitive relation between the act of perceiving and the sense-datum. The relation between the sense-datum and the material thing could be conceived in different ways.

Now the view produced by this alteration in the account of the cognitive relation has been very generally adopted. It appears, for example, in Descartes and Locke, and in the traditional assumptions of the natural scientists. It appears in various refined forms in the theories of such modern philosophers as Professors Stout, Broad, Whitehead, and Price. I propose to speak of it as *subjectivism,* though I realise that many of the philosophers mentioned would object to the word. The word is not meant to imply anything more than I have just stated.

The point that is of immediate interest in this type of theory is that it appears to get rid of our temporal difficulty. There is nothing incompatible about the statements that the material event *precedes* the act of perception, and that the sense-datum is *contemporary* with it. We have cut at the joint, and have let the material thing serve us for one statement, and the sense-datum for the other.

It may seem, then, that the whole difficulty can be solved on these lines, and therefore requires no further discussion. But this, alas, is not the case. For the subjectivist theory, in the state in which we have left it, is not really a theory at all. To be a theory of perception it must show how we perceive material things. All that it has done so far is to state that we sense sense-data. Unless it can show further how we come to know that material things exist, the statement that the act of sensing is caused by a material thing is a mere gratuitous assumption. To be a theory, subjectivism must show that somehow, by means of sense-data or in any other way, the percipient must be cognitively related to material things.

There have been various ways put forward for showing this. I will only mention that maintained by Professor Price. His view is that there is a perceptual consciousness, which is something over and above sensing, and that this is a relation of an indirect pseudo-intuitive character, in which the percipient cognises material things. In the primary form of perceptual consciousness, he says, we "take for granted" a material thing, "such that the sense-datum which I now sense belongs to it".[1] This is a way in which the subjectivist view can be turned into a theory of perception.

In this process of development, however, we have to beware lest the temporal discrepancy, which we have thought to have banished, reinsert itself in another form. It would be natural to conceive the object of perceptual consciousness, as described by Professor Price, as being a contemporary material event. But clearly this is not possible. If Professor Price is to admit that our cognitive relation, however indirect, is to a contemporary material thing, he has made no advance at all on naïve realism in the solving of the problem of temporal discrepancy. The substitution of an indirect cognitive relation for one of immediate givenness has undoubtedly made easier the explanation of illusions in general, but as far as temporal compatibility with the causal relation is concerned, the position is unchanged.

To make this quite clear, let me repeat the difficulty in its new form. The differential cause of my sensing of the coloured perspectives when I "see an axe striking a log" is, on the subjectivist theory, a particular arrangement of the material things, axe and log, at a particular moment. This arrangement of these things occurs before the coloured perspectives sensed—and hence also before any arrangement of things which we are alleged to perceive as contemporary on the basis of such sensing. The actual arrangement of things that is contemporary with the sensing—and hence also with the sense-data and the things allegedly perceived as contemporary—may well be something different; for example, an axe raised above the axeman's head. Hence if the object of perceptual consciousness is to be, as alleged, identical with the contemporary material thing, it would have to be the axe raised above the head rather than the axe striking the log. But this is just what it is not. Thus if we are to retain the account of the causal relation, not even the subjectivist can assert a cognitive relation to a contemporary material thing. And if the material thing perceived cannot be contemporary with the act of perceptual consciousness, there is only one alternative left open. The object of perceptual consciousness must be *identical with the antecedent material thing.* This requirement may seem strange, but it is a requirement which any subjectivist theory of Professor Price's type must fulfil, if it is to provide us with consistent statements concerning cognitive and causal relations.

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[1] Price, "Perception", Ch. VI.

Now that we are embarked on a discussion of Professor Price's theory, we should consider whether his distinction between "material thing" and "physical occupant"[1] makes any difference to the situation. On this theory, a full material thing can be analysed into two parts. Firstly it has sensory characteristics, which are undoubtedly contemporary with our sensing and our perceptual consciousness. Secondly it includes also a "physical occupant" possessing causal characteristics and occupying the same region as the sensory characteristics. If we accept this distinction, it certainly does alter the situation, but it can be shown that it still does nothing to remove the difficulty. At some specific time, say, there is an actual sense-datum. This is contemporary with the sensing of it. Let us admit that this forms part of the material thing. Then the temporal problem which we took as concerning the relation of sense-datum and material thing, breaks out in just the same way within the material thing. A physical occupant is said to be "coincident" with the family of which this actual sense-datum is a member. We must now ask concerning this physical occupant the same questions as we previously asked concerning the material thing. And we are led to the conclusion that though it is coincident in space, it cannot be coincident in time, but rather antecedent. The material thing, according to Price's definition of it, is something of which one part exists at a time later than the other. This does indeed mean altering the statement of the temporal requirement we have just imposed, but it does not alter its significance. The object of perceptual consciousness is, on this view, composite, consisting of both sense-data and physical occupant; and it is only the physical occupant which we require to be antecedent. We must therefore state the requirement thus—that the object of perceptual consciousness must be identical with a material thing the physical part of which is antecedent. If we alter our statement in this way our previous conclusion is not affected.

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[1] Price, "Perception", Ch. IX.

Despite the importance of the object of perceptual consciousness being regarded, in part at any rate, as antecedent to the act of perceptual consciousness, it is interesting to note that Professor Price himself appears to be uncertain on the matter. The general impression that is given, so long as any is given at all, is that the whole material thing of which we are perceptually conscious is contemporary with the act of consciousness. Let us compare two formulations of what is taken for granted in perceptual acceptance. It is said first (p. 142) that we take for granted that there exists a material thing "such that this sense-datum which I *now* sense belongs to it". In summing up later, however (p. 145), it is said that "what the perceptually conscious subject takes for granted when he senses a particular visual or tactual sense-datum is that there *now* exists a material thing to which this sense-datum belongs". This casual transposition of the "now" from the sense-datum to the material thing can only be due to the general assumption that the whole material thing, including the physical occupant with its causal characteristics, is contemporary. This view is further supported by the failure to mention what would otherwise be a very curious fact about a material thing—namely, that its two parts do not exist at the same time.

There is, however, one passage where this other view is implied. This is on p. 270, where Price speaks of sense-data of one family not being contemporary existents, but being rather contemporary alternatives. He adds at this point that "what we call 'the fact that light has a finite velocity' " introduces a "complication". Two visual sense-data of the same family are in fact not quite contemporary alternatives, unless the points of view from which they are obtainable are at the same distance from the standard solid. This passage indicates that the physical occupant (which is coincident with the standard solid) is regarded as antecedent to the sense-datum, and that the time between the two varies with the time required for the causal relation. If the physical occupant were contemporary with any actual sense-datum, it would be contemporary with the whole family and they would all be contemporary with each other.

So here we have statements which point in opposite directions. If the first tendency is maintained, the theory remains open to the original charge of temporal discrepancy; it does not fulfil the requirement we have demanded of this type of theory. The second tendency is clearly the one which must be adopted. The theory must accept all the consequences of the 'fact that light has a finite velocity'.

What applies to Professor Price's theory applies generally. It is not easy to present a subjectivist theory, which, while it admits that we may sense contemporary sense-data, must deny that we cognise contemporary material things. However, I am not here concerned to state one. I merely want to point out that unless one is stated, there is no subjectivist way out of the temporal difficulty which we have found to be inherent in naïve realism.

Before leaving this subjectivist solution of our problem, I would like to add that it involves a further difficulty about *space*. It must be admitted that both the causal and the cognitive relations of which we have been speaking are spatial in character. One involves some sort of transmission through space, and the other does not, but both hold between entities separated by a certain distance. The naïvely realistic theory with which we started clearly regarded these two sorts of relation as taking place in the same spatial continuum. The space in which the material thing was perceived to exist, was the same as the space in which it exerted its causal efficacy on one's body. This simple and satisfactory account of space was one of the greatest virtues of this theory. But we saw that it led to a discrepancy in regard to time, and we therefore turned to subjectivism for a solution.

Now, on the subjectivist view, we still have to admit that certain sense-data—the visual and tactual ones—are spatial in character. This immediately leads to a difficulty. It is significant that the older types of subjectivist theory spoke of sense-data as "ideas in the mind", and thereby gave the illicit impression that they were spatially coincident with the percipient's standpoint. But if we refuse to be misled in this way, we must note the following consequences.

The material thing must from its very nature be regarded as existing in space, what we may call a "real" causal space. The percipient's act of perceiving is the result of transmissions through this causal space into the body and brain of the percipient. But what happens now? As part of the act of perceiving, the percipient senses sense-data, and these sense-data are "out there" in space—presumably the self-same space. If this is so, the sense-data are placed in a very trying position. It may be thought that they are simply spatially coincident with the material thing which caused the perception of them. But this is not so. That material thing is already in the past; and the sense-data are simply trespassing in the subsequent causal order of events. They may be spatially coincident with something with which they are entirely out of relation. The sense-data belonging to the axe, for example, may well be in the place that we know to be physically occupied by particles of air, the axe having already shifted its position. And they will be in that place without having a causal relation to anything whatsoever.

This is certainly a curious position, and not one which anyone would be very willing to hold. The alternative is to suppose that the space of sense-data is distinct from causal space. The sense-datum and the percipient and the immediate spatial relation between them would have to be regarded as constituting one whole perceptual situation, all of which, as a whole, is the result of causal transmissions originating from the material thing in causal space. From the point of view of causal space, this whole perceptual situation would take place in the percipient's mind. But the whole perceptual situation would possess a spatial field of its own.

Now if, through the desire to avoid the temporal discrepancy, the subjectivist theory is driven back to this, it has even less opportunity than before of becoming a genuine theory, in the sense that it can show how we come to perceive material things. If the sense-data are in a completely different spatial continuum from that in which material things are thought to be situated, it is a large step to take from one to the other. For one thing, the conception of spatial coincidence of certain sense-data with the physical occupant of a region of space—a conception by which Professor Price at one stage tries to effect the connection—would not be tenable. Thus when the problems of space are considered, there appears to be less chance than ever of removing the temporal discrepancy through a resort to subjectivism.

I am afraid that this discussion has remained entirely negative in character. I would like, however, to end it on a positive, even if uncertain, note. Recently Professor A. N. Whitehead has produced a metaphysical system in which he lays considerable stress on a distinction between two modes of perception—the mode of presentational immediacy and the mode of causal efficacy.[1] It seems that in the notion of perception in the mode of causal efficacy, there lies a very important suggestion for the removal of difficulties with regard to the immediate past. Such causal perception is spoken of as the "direct knowledge of the antecedent functioning of the body in sense-perception". Whitehead refers to the way in which we commonly speak of seeing a thing *with* our eyes, touching it *with* our hands, and so on; and claims that this indicates a basic and underlying form of perception—a perception of the world in the immediate past as it has affected us. It is this which gives us our contact with the world around us, the sense-data of presentational immediacy only serving to "illustrate" this world and "rescue it from vagueness".

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[1] A. N. Whitehead, "Process and Reality".

This theory is extremely interesting in many respects. Its special interest for us, however, lies in the fact that it suggests a way of avoiding temporal discrepancy. The causal relation to the material thing of the immediate past becomes at the same time a peculiar but fundamental type of cognitive relation. The theory does not deny that material things are immediately given to the percipient; to this extent it is lined up with naïve realism. What it does deny is that all of what is immediately given is necessarily contemporary with the act of perceiving it. The same material event, in causally affecting us, is also given to us in a vague though fundamental sort of way.

I do not propose to enter into the details of this theory here. There are in fact considerable difficulties in its working out, quite apart from the basic question as to whether we really do have such causal experience at all. But I do consider it important, inasmuch as it is a conscious attempt to get over a problem which has often not been taken sufficiently seriously.

THE NATION AND THE INDIVIDUAL.

By Arthur N. Prior.

This paper is an attempt to apply the method of philosophical "analysis", as expounded by such writers as John Wisdom, to the problem of the relations between the Nation or Nation-State and the Individual.

There would appear to be three main ways of regarding statements which purport to be about "nations", on the assumption that such statements are not always meaningless. On the first of these possible views, such statements may be taken to be "about" a particular kind of real entity, not reducible, or at all events not completely reducible, to any other kind of entity. This "monistic" view is mainly represented by those who hold an "organic" view of the State or nation, and who, in effect, treat it as an enlarged person, or rather as a super-person, the source and fount of what "personality" there may be in its members. There is on this view a profound distinction between the morality of "nations" and the morality of "individuals", reflected in a corresponding distinction between the morality of individuals *as* individuals and the morality of individuals as "members" of nations. Acts of lying, promise-breaking, cruelty, and murder, which have no justification in the relations of private persons, may have every justification on certain occasions when the individual is acting as an "arm" or "hand" or "eye" of the Nation-State. "Private morality", moreover, is essentially relative and derived, applying only within certain relationships brought into being through national organisation.

A second possible view is that which regards nations as entities *definable*—in the ordinary sense of "definable"—in terms of individuals. A nation *is* a certain number of individuals. "England", for example, simply *is* "Tom and Dick and Harry and George and Mary and Elizabeth", etc.; and this list of persons may be substituted for "England" in any statement about "England", without altering the meaning of the statement. The only other changes that will have to be made to keep the statement sensible are minor ones of no logical importance, such as the substitution of a plural verb for a singular. "England", on this view, is not a single individual, but *is* a number of individuals. And when England is said to be a "good nation", this simply means that a preponderating majority of Englishmen are good men. The monist's distinction between "private" and "public" morality is here abandoned.

The former of these two theories is frankly propounded by Fascists at the present time, while the latter is, approximately, the traditional position of Liberalism and Democracy. Or more accurately, it is the position theoretically adopted by Liberalism, but never consistently maintained by anyone. Various attempts at combining the two views are common, and, owing to the manifestly unsatisfactory nature of both, inevitable so long as they are regarded as the only alternatives. When representatives of the Oxford Group Movement, for instance, speak of a "God-guided nation", they sometimes appear to mean a nation of "God-guided" individuals, and sometimes one whole "God-guided" national unit.

The linguistic apparatus of modern "analytic" philosophy, however, makes it possible to state quite clearly a third and completely different theory, fundamentally "pluralistic" and yet bringing out sharply a distinction between moral predicates as applied to "nations" and moral predicates as applied to "individuals". This is the theory that "nations" are "logical constructions". "Logical constructions" are neither ultimate particular constituents of the real world nor "definable" in the ordinary way in terms of other constituents of the real world; and in that sense they are "unreal", "fictitious" entities. Nevertheless, statements about them are not necessarily meaningless. At least some statements about them are equivalent to statements about real particular entities, but—and here is the essential point—never to *the same* statements about real particular entities. They can never be given definitions which are simply *substitutable* for them, as "male parent" is substitutable for "father" in any statement about a "father" or "fathers"; but they can be given "definitions in use" in the sense of *different statements* about other things which are substitutable for statements about them. Any significant statement about "England", for instance, is not equivalent to *the same* statement about Tom, Dick, Harry, etc., but is quite precisely equivalent to *another* statement, or a set of other statements, about Tom, Dick, Harry, etc. (and if it is not, on the view that "nations" are "logical constructions", it is meaningless). The statement that "England made war on France", to make our instance more specific, is not equivalent to "Tom made war on France, Dick made war on France, Harry made war on France, etc.", but to a set of statements like "Tom made a belligerent speech in the House of Commons", "Dick dropped a number of bombs on a queue of Parisian women and children", and "Harry was put in prison for being a conscientious objector".

It is, in fact, *never* possible to make the same statement about a "logical construction" as about a real individual. We may use the same words about the two types of object, but never with quite the same meaning (though usually the meanings are closely connected, sometimes closely enough to be identical for most practical purposes). When, for example, one nation is said to "attack" another nation, the word "attack" does not mean quite the same as it does when one person is said to "attack" another. The point is, of course, much clearer when these meaning-differences are reproduced in appropriate language-differences, and there are actual words which are always used with "logical constructions" and never with real individuals, or vice versa. The word "invade" is an instance of this—we speak of one nation "invading" another, but not of one person "invading" another. But even where the same words are used—words such as "capitalist" or "good" or

"Christian"—they never mean quite the same thing. Often the use of language will reveal the difference even here, if it is examined more carefully. Thus, although we apply the adjectives "capitalist" and "Christian" both to men and to nations, the same words used as nouns can only be applied to persons. A "Christian man" is also called simply "a Christian"; a "Christian nation" is never referred to simply as "a Christian". And while a "capitalist man" is almost always called simply "a capitalist", a "capitalist nation" is hardly, if ever, called "a capitalist".

This theory renders meaningless a great deal of our common language about nations and nation-states. If it is admitted, for instance, that there are "duties" which hold between one individual and another, it is meaningless to speak of the "duties" which the individual owes to the nation, or which the nation owes to the individual, or which one nation owes to another. Much language of this kind, however, may be justified in practice, as it may be the least misleading way of referring briefly to quite real relations between individuals. While it is true that, in all strictness, I have no duties to the nation to which I belong, it is also quite certainly true that, because we work together in the particular way that makes it convenient and significant to refer indirectly to us by speaking about a "nation", I have all sorts of duties to the postman, the Prime Minister, the man who lives next door to me, etc., which may be conveniently spoken about as duties to my country or to my nation (such as the duty to pay taxes).

Nevertheless, while common language in many cases is not at all misleading, and to insist on strict accuracy would be clumsy and pedantic, there are many other cases in which common language *is* misleading, and is indeed the instrument of very grave moral confusion. Common language may lead us to argue, for instance, that since an individual capitalist may be a good man, a "capitalist nation" necessarily has an equal chance of being a "good nation". On the view that a nation is a logical construction, this does not follow at all, since the term "good" and the term "capitalist" both mean entirely different things when applied to nations and when applied to individuals. If a nation is itself an enlarged individual, then the argument is quite possibly a good one, for the moral judgments which apply to small individuals are presumably applicable to large ones also (even though this leads to a divorce between the "private" and the "public" morality of the small individuals). And again, if a "capitalist nation" means a "nation of capitalists", the moral judgment which applies to any one of them may apply also to them all. A "capitalist nation", however, is not an enlarged capitalist, and is most certainly not a nation of capitalists, but is a community some of whose members are capitalists, some wage-earners, and some a mixture of both; and even if this arrangement *is* a good one, that fact does not follow from the fact that an individual capitalist may be a good man.

There are also cases in which common language does not perhaps lead to such definite misconceptions, but is none the less hopelessly obscure. What can be meant, for example, when a war is described as the "punishment" of one nation by another, if it does not mean either that war is the punishment of one large individual by another large individual (which is superstitious), or that it is the punishment of a number of wicked people by a number of good people (which is often palpably untrue)? If we adopt the view that "nations" are logical constructions, language of this kind, as well as language that leads to more definite misconceptions, will need to be abandoned.

REVIEWS.

Studies in the History of Ideas: Volume III. Edited by the Department of Philosophy of Columbia University. New York: Columbia University Press, 1935. (Published in England by Humphrey Milford, Oxford University Press.) Pp. 511. English price: 21s.

The thirteen papers in this volume vary considerably in merit and range in length from eight to seventy-seven pages. The longest, "Renaissance and Method in Philosophy", by Richard McKeon, is also the most important, presenting us at once with valuable historical material and with a standpoint from which the various contributions (and, indeed, historical studies generally) can be estimated.

The elaborate critical apparatus of the "scientific historian", McKeon points out, is not enough to ensure an understanding of the movements under investigation; it tends to cloud issues which a simpler approach had at least stated intelligibly, and to conceal its partiality under the pretence of an impartial scrutiny of documents. "The question, whether a given set of ideas is to be considered the corruption and disintegration of those of an earlier period, or whether it constitutes the reorganisation, supplement, criticism by which the sounder doctrines of a later period are prepared, is one which is never far from the surface in a work which sets ideas beside ideas in a historical order. It is resolved, not by precision in working over documents, but by criteria which operate, usually surreptitiously, in the estimation of the utility and truth of ideas. Plato's conception of philosophy is in contradiction with that of Aristotle: to state the doctrine of either is a task of exposition, of philosophical history; to state their differences or their agreements is a task of pure philosophy" (pp. 40, 1). The important point, which McKeon never makes quite clearly, is that, while we can make philosophical progress by historical study, it is only within the limits of our understanding of pure philosophy that we are able to present philosophical history.

McKeon emphasises the fact that, within what was regarded as the period of darkness preceding "the" Renaissance, there were many "renaissances", many occasions of a presumed rebirth of letters; but, most particularly, he contrasts the movements of which Abailard and Erasmus may respectively be taken as the leading figures, the contrast being expressible in terms of the arts of "grammar" and "dialectic". (The art of rhetoric is also discussed, but it is of minor importance here.) "For Abailard, grammar is the art of exploring the meanings of texts, in need, however, of the aid of dialectic whenever difficulties are found; for Erasmus, too, grammar is the art of exploring the meanings of texts, but no difficulty can arise for the solution of which, if it is soluble, grammar is not sufficient, since grammar can resort, in the one direction, to the criticism of manuscripts and translations, in the other, to figurative usages" (p. 82). Thus, while Abailard sought among the ancients for anticipations of true doctrine (which, for him, was founded on the doctrine of the Trinity), Erasmus sought for anticipations of a "natural" way of living, enabling even the humblest to be virtuous. So that, however "scholarly" Erasmus may have been, his humanism exhibited the modern, unphilosophical approach (appearing again in the contemporary schools which seek only to "clarify meanings"), whereas Abailard, even if his doctrine was wrong, adhered to the only philosophical *method*. McKeon himself does not come to this conclusion; he professes (p. 108) to have given only a "grammatical" exposition. What he has sought to show is that there can be grammatical, rhetorical and dialectical interpretations of the "Abailards" of history; yet, "though each interpretation is impregnable within its own limits, when brought into controversy the debate is ultimately dialectical" (p. 111). And he concludes (p. 114) by saying that his essay as a whole "is itself illustration once more of Abailard's favourite quotation from Cicero, that all controversies are concerned with writings or reasons, but ultimately the controversies concerning writings are controversies about reasons".

It would appear from this that *no* interpretation is impregnable to "dialectical" criticism. In fact, there can be no exposition, alike of single doctrines and of connections between them, without criticism, i.e., without an independent knowledge, on the part of the expositor, of the *subject-matter*. Dialectic, so understood, is an essential ingredient of scholarship; and it is because, in the main, they have sought to be scholarly in the "grammatical" sense, that the contributors to this volume lack force—that an air of scepticism is over it all. Of course, if we interpret doctrines in terms of what we ourselves believe, we shall misinterpret them in the case where our beliefs are wrong. Thus it is no doubt because Sidney Hook himself bifurcates nature into the social and the non-social, that, in discussing "Hegel and Marx",[1] he takes the view that Marx did not, like Engels, believe in a *Natur-Dialektik.* It would not be hard to give a "textual" demonstration of Hook's error here. In fact, he himself quotes (p. 352) the passage, in the preface to the second edition of "Capital", in which Marx contrasts his dialectic method with Hegel's and maintains that "the ideal is nothing else than the material world reflected by the human mind, and translated into forms of thought". We are the less inclined to credit the view that by "the material world" here Marx meant forms of social relation, when we reflect that Hegel, whose position Marx says he is reversing, certainly regarded the whole of Nature as reflecting (or expressing) the Idea. But, even if Hook is wrong on this point, he advances discussion by taking up a positive position, by showing in terms of what beliefs he is conducting his interpretation; as McKeon has indicated, it is the operation of *unstated* beliefs that leads to the most serious confusion.

This does not mean that we have to accept the view which Hook (p. 345) regards Hegel and Marx as sharing, that

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[1] The essay appears again as the opening part of Hook's "From Hegel to Marx", on which I made some comments in my article, "Marxist Ethics", in the June issue of the Journal.

"Philosophy is in some sense a *normative* inquiry", and that we should prefer Marx to Hegel because he "frankly avowed his own presuppositions and bias". The question is always of something believed to be *true*; Marx could have had no *criticism* of standpoints if it had been simply a question of his having a standpoint which clashed with others. Certainly it makes a considerable difference if the beliefs which guide the criticism are actually not true, but much is gained, in any case, by making them explicit; and Rudolf Kagey's paper on "Coleridge" (which is perhaps the liveliest contribution to the volume) gives the impression that it owes a good deal of its effectiveness to its author's acceptance of the Hegelian doctrine of the concrete universal, towards which he shows Coleridge to have been working. The critical question here is that of the *working out* of a position. Gail Kennedy, writing of "The Pragmatic Naturalism of Chauncey Wright" (and exhibiting the naturalism much more than the pragmatism), cites Wright's description of cosmological systems as "a fine composition of poetry under the forms of science" (pp. 486, 8). This is not an objection to any doctrine. We make scientific progress only by exercising the "will to believe", only by being so carried away by a doctrine that we allow it to "generate" a position, that we "construct" a theory in terms of it. The danger is that our adherence to it should lead us to falsify the facts; we are all too familiar with "interpretations" which get round inconvenient "appearances" by giving them an appropriate "underlying significance". It is to be remembered that what are called the consequences of a supposition are in fact the consequences of it taken along with a number of propositions that we believe; so that the coherence of a view is its coherence with facts, and, if we are mistaken about the facts, we shall be mistaken about the coherence. There is, then, no one test of any theory; but, if we always adopt a cautious attitude to theories, if we never "give them a chance", if we are not prepared, on their behalf, to call in question beliefs we have hitherto entertained, our thinking will not advance. This is still consistent with the fact that advance consists in discovering what is true.

But, even if our philosophical views are true, there is the special danger, in historical studies, of our attributing them (or "anticipations" of them) to thinkers who may have been concerned with quite other problems. It is here that "grammatical" studies have their use; and it may be said that philosophical scholarship involves the combination of textual accuracy with sound philosophy. It has, however, been urged that the first is severely limited without the second; and, in so far as the two can be separated, it may fairly be claimed that the second is more useful to the student. Thus McKeon (p. 66) quotes Abailard as saying: "We set as foundation of all good things the faith of the holy Trinity, in such wise that the beginning of all goods is derived from the very knowledge of the divine nature. Whoever, consequently, should be able to weaken that foundation, leaves to us nothing of those things which are built upon that foundation." It is not mentioned, in comment, that the denial of a premise does not involve the denial of a conclusion; yet the fact that Abailard argued in this way may well have considerable relevance to the controversies in which he was engaged. The same point arises in Ernest Nagel's discussion of the development of the theory of "Impossible Numbers", when he cites Robert Woodhouse's contention that "if operations with any characters or signs lead to just conclusions, such operations must be true by virtue of some principle or other; and the objections against imaginary quantities ought to be directed upon the unsatisfactory explanation given of their nature and uses" (pp. 446, 7); and, instead of taking up what is here a crucial issue, Nagel goes on to speak of Woodhouse as "anticipating the logical developments of a century later" in describing demonstration as "a method of showing the agreement of remote ideas by a train of intermediate ideas, each agreeing with that next it"—a description which, in its employment of the *symmetrical* relation of agreement, begs the whole question.

It is likewise a defect in Howard Selsam's paper, "Spinoza: Art and the Geometric Order", that, in connecting the geometrical method with a certain æsthetic character of the *Ethics,* he offers no criticism of Spinoza's view of geometry, but seems to believe that geometry actually is "unfolded" from axiomatic principles. This somewhat weakens his æsthetic exposition, as when he argues (p. 257) that there is beauty "in the peculiar organic nature of a deductive system in which, as Plotinus says, 'all is in act at once'. The part draws its force from its union with the whole and each proposition contains potentially all the other propositions of the system." The most that Selsam can be said to bring out is the æsthetic importance of order; he does not show that the order of the emotions is a peculiarly geometrical order, or that "to consider them in the geometric manner is to study their generation through universal laws and rules of nature, out of man's position in the world of extension and thought" (p. 262). In fact, he destroys his case when, in going on to speak of the architectonic of the logical order of the emotions, he says: "That this particular order is an arbitrary one need not be gainsaid. Any other order of equal architectonic merit would do as well." The point is that there can be no alternative æsthetic orders; and, while there is undoubtedly arbitrariness in any choice of "first principles", this implies a failure in order. Spinoza's geometrising serves only to cover the weakness of his romanticism, the non-existence of his theme of "man's salvation"; and it is not surprising that Selsam is more convincing in exhibiting the "artistry" of the fourth act of the drama, on human bondage, than in portraying the final triumph of human freedom. "An emotion can be controlled only by a stronger contrary emotion, and the knowledge of good and evil is itself an emotion. Thus, although a true knowledge of good and evil cannot destroy a passion because it is true, it may do so in so far as it is an emotion" (p. 265). Here, without realising it, Selsam shows that, in Part IV, Spinoza has presented the true material of ethics, which is alien alike to "first principles" and to "salvation".

The most striking example of the insufficiently "dialectical" outlook is to be found in the opening (twenty-page) essay by John Dewey, "An Empirical Survey of Empiricisms". One might describe Dewey as the outstanding contemporary humanist, concerned, like Erasmus, with ways of living more than with truth—in fact, degrading truth to be the instrument of "life". In the present instance, an understanding of what is the case would have greatly clarified the exposition of what people have thought and would have enabled a stricter view to be taken of the nature of empiricism, which appears only as a name that happens to have been applied to a number of different doctrines. Dewey presents the depreciatory, Greek view of experience (illustrated in the "empirical" judgment, mentioned by James, that "the smoke will stop when the train starts, because it has always done so") in the form that "experience cannot give rise to knowledge in the honorific sense of science, but only to opinion, and, although opinions may sometimes be correct, that occurs, so to speak, by accident, because there is no knowledge of why they are true" (p. 5). Critical consideration would at once suggest that, if we find a "reason" for A's being always B, this can only be of the form that A is X and *X is always B*; so that, if opinions are right by accident, the same is true of "knowledge" which depends on opinion. There is no ground, then, for the distinction of science from experience. The same applies to the "truly empirical contribution of Hume", which "lay in his revival of the concepts of habit and of custom and their importance" (p. 17). The point is that what we are accustomed to is certain *kinds* of things, is things operating in certain *ways*. Kagey points out (p. 311) that Coleridge had no room in his own system for the doctrine of association, since he denied that thought is atomic, that ideas are particular discrete entities. "I almost think that ideas never recall ideas [he writes in a letter to Southey] . . . . any more than leaves in a forest create each other's motion. The breeze it is runs thro' them—it is the soul of state of feeling." But, disregarding objections to Coleridge's peculiar formulation, we cannot say that this makes him a "critic of empiricism", since the point is that there is *no* experience of discrete entities, and, if there were, as Hume himself points out, nothing could make a "tie" between them. The notion of the individual sensation is not an empirical but a rationalistic one; we have experience of nothing less, and nothing more, than situations (propositions), and this propositional theory, as against all essences, powers or instrumentalities, is alone entitled to be called empiricism.

There are two fairly lengthy and useful studies in Cartesianism—"Cartesian Doctrine and the Animal Soul: an Incident in the Formation of the Modern Philosophical Tradition", by Albert G. A. Balz, and "The Rôle of Descartes in Seventeenth-Century England", by Sterling P. Lamprecht—though, as before, their usefulness is limited by the authors' desire not to obtrude their own views. What emerges most clearly from Balz's paper is the dilemma of Cartesianism, the fact that any argument for animal automatism is an argument for human automatism, and, correspondingly, that any argument for the human soul is an argument for the animal soul. All that stands between Descartes and complete "mechanism" is the *cogito,* and the emptiness of this principle no doubt accounts for the largely empiricist character of Descartes's influence. It should be noted, in any case, that if the *cogito* is our basis, we have as much reason for regarding *other men* as automata as for thinking so about animals. It is interesting to note, also, in connection with the question of empiricist or rationalist influence, that, as Lamprecht points out (pp. 214, 5), the majority of Descartes's English critics objected to the view that it is possible to doubt the findings of reason. Herbert W. Schneider concludes his paper on "Mill's Methods and Formal Logic" by remarking: "Nothing could be more detrimental to the science of logic and the practice of thinking than the current notion that there is a difference between the reason of discourse and the reason of experiment. Common sense would lead us to believe that they must be the same; this paper has attempted to prove that they are" (p. 426). But, while he holds the sound view that Mill establishes no distinction between induction and deduction, Schneider cannot be said to have given a satisfactory proof of it; he has not sufficiently considered the use of hypotheses or dealt at all with the possibility of analysing a situation into a finite number of factors. Nagel's account of the history of views of "impossible numbers" is marred, as already suggested, by the lack of a critical logic; so that little illumination is given to the crucial problem of the difference (if any) between logic and mathematics.

Allowing for all criticisms, it should, I hope, be clear that this book opens up questions and contains material of the utmost importance, and that it should arouse, on the part of the reader, a "dialectical" effort which will be well repaid.

JOHN ANDERSON.

PASSIVITY AND RATIONALIZATION. By Nathan Fialko. John Lowell Pratt. New York, 1935. $2.50.

Fialko's thesis takes the form of a criticism of current modes of living and a prophecy of a new and better age. He argues that though man is naturally creative, the majority of men are now unable to exercise their faculty, and are conscious only of frustration and passivity. A new age must begin with the rationalisation of this passivity. The thesis is far-fetched both in its interpretation of present-day living and in its prophecy for the future. Fialko can support his prophecy of the inevitability of the rationalisation of passivity only by arguing that "the dignity of the human personality must be restored and placed on its natural pedestal" (p. 155). But it is sheer optimism to expect history to fit in with our moralistic requirements, and even if we agreed that there could be a change in the position of the masses, Fialko's programme takes no account of the opposition of those "oppressors" of the masses, whom he has just been discussing, and whose power to stifle opposition and even critical discussion he elsewhere recognises to the full, for example, in his discussion of Fascism. He says simply: ". . . the rationalization occurs as a spontaneous crystallization of a multitude of new social forms" (p. 155). "In a stagnating mass of people saturated with passivity a new form of social creativity has come to exist. Thousands and millions of people, individually isolated and helpless, are joining into tens, and are forming popular units. Ten political clubs or popular units residing in the same locality commune with one another, unite, and form a larger community, or the second political club. Ten communities join together and form a society of one thousand members, thus constituting the first national organ. Ten societies affiliate into an association. Ten associations establish contact and organize a popular union, or the first national unit. Ten contiguous national units occupy a political territory, which presents a whole state constituted by one million persons" (p. 156). The question still remains after all this: How are the "oppressors" or the "active individuals", as Fialko terms them, to be brought into agreement with this scheme of clubs, communities, units, etc.?

The weakness of his remedy is connected with Fialko's false interpretation of current events, his notion that the individual is no longer capable of social or mass action, having nothing in common with other individuals but a sense of passivity. Fialko sees clearly enough the hypocrisy of the theory of the democratic state as that in which the people have the controlling voice in the government. He shows up the fiasco of the franchise, the contradiction involved in the notion that voting is both a right and an obligation, and the ignorance of the elector as to the character, ability and policy of the candidate, and as to the nature of the positions in the government which are to be filled. Further, he asks the pertinent question: "If the vote is intended to be a guarantee of political freedom, why should it be a secret performance?" And he recognises the use of social service as taking from the hands of the masses "the initiative for any independent action". But while these observations certainly show that the masses are not the ruling power in the country, they cannot be taken as verifications of Fialko's theory of the masses as being wholly passive and helpless. That would require a denial of the existence of working-class activities, and Fialko does deny the existence of the proletariat as a class whose members have common interests and are capable of concerted action. However, working-class activity is a fact which cannot be explained away as not spontaneous on the part of the workers, and as due simply to outside influence.

Fialko explains the origin of the present passivity in terms of a theory of contingencies, a contingency being an act or creation of man. In a period of normal creativity, each individual would be creating "primary contingencies", which are made up of several elements, "the individual organic matter, the active part of the inherited psychic content, the active part of the acquired psychic content, and some unknown thing which is already a particle of the future—all this organic composition operating over any accidental external object, and simultaneously interacting with a similar composition of facts of another human individual" (p. 117). However, the mutual commerce between concentrations (i.e., countries) causes "extended" or "migrating" contingencies to arise, and when an individual has more of this type of contingency than has the ordinary man, he is an "active" individual and gains influence at the expense of the multitude of people. Here again we have a fantastic treatment of a sociological question. It *is* possible to draw a distinction between the multitude and the commercial (who are also the ruling) interests within a country, and it may be granted that the position of the workers deprives them of initiative and responsibility in their work, but it is hardly the case that their "personalities are absorbed in the process, as so much spiritual food for the active individual" (p. 143). Further, there is nothing in their position that makes it inherently impossible for them to alter the present state of affairs and to control both commerce and government. Certainly something more would be required than a mere "spontaneous crystallization" of new social forms. Such a scheme of government as

Fialko describes already implies, and does not create, an equality among individuals.

ALICE R. WALKER.

PSYCHE: AN ANNUAL OF GENERAL AND LINGUISTIC PSYCHOLOGY. Vol. XIV, 1934. Edited by C. K. Ogden. The Orthological Institute, Cambridge. Kegan Paul. 10s. net.

The articles in this volume are too diverse in subject-matter to permit of any general comment, nor are some of them of sufficient importance to call for any notice at all. The longest, Ogden's *The Magic of Words,* is an exposition of the theories of language of Bacon, Hobbes and Berkeley, providing historical material supplementary to that already published in *The Meaning of Meaning* and in *Bentham's Theory of Fictions.* This, together with the three papers which follow (Richards' on *The Sense of Musical Delight,* Carnap's on *The Rejection of Metaphysics,* and Buchanan's *An Introduction to Medieval Orthology*), are all concerned with language and its relation to thought; and all have this at least in common, that they attach extraordinary importance to the theory of language as illuminating logical issues. Berkeley was prepared even to say that all error arises from linguistic confusion and can be removed by attention to the use of words; Ogden himself, so far as can be gathered from a rather confused discussion, is hardly less optimistic. It is well known also how the Vienna Circle with their Principle of Verifiability which Carnap here expounds, claim to have shown how the great conflicts of philosophy are entirely verbal. Richards sets out to demonstrate how a correct understanding of the nature of words leads to the solution of perennial æsthetic problems. The study of language, we are given to understand, is the royal road to wisdom.

But, much as one would like to see the world delivered from metaphysics, it may be doubted whether deliverance will come either from Vienna or from the Orthological Institute. Allowing for the brevity of Carnap's paper and its mainly expository character, one is still struck by the arbitrariness with which certain propositions are said to be meaningless. "Take as an example the moral norm 'Do not kill', or the corresponding judgment of value 'Killing is evil'. It is easy to realise that from this proposition either in the form of a norm or of a judgment of value we cannot deduce any proposition about future experiences." That Carnap should assume that 'Killing is evil' is a 'corresponding form' of 'Do not kill' shows little acquaintance with at least some developments of ethical theory, and no close consideration of what precisely metaphysics is. It is obvious, in any case, that the Principle of Verifiability could provide no handy, non-ethical formula for disposing of ethical problems. The assertion 'Killing is evil' may be false or it may be meaningless; either question could be settled only by entering the field of ethical speculation. The trouble with the Principle of Verifiability is, that since any theorist would admit that a significant proposition will have consequences of some sort, it is quite useless in argument.

Carnap's discussion suggests the question of what sort of verification we may expect for a philosophical assertion. "While from the assertion of the reality or existence of kangaroos", he writes, "we *can* deduce perceptive propositions, from the assertion of the reality of the physical world this is not possible; neither is it possible from the opposite assertion of the unreality of the physical world. Therefore both assertions have no empirical content—no sense at all." Questions of "the Reality of other minds, the Reality of relations, the Reality of qualities" whether answered positively or negatively have no consequences "for any system of scientific hypotheses". A minor difficulty here would be to explain how two equally senseless assertions could be said to be 'opposite'. But, on the main point of verifiability, it might be admitted that differences in logical doctrine do not necessitate differences in, for example, chemical or biological theory; Kant might admit, for instance, that acceptance of the Critical doctrine would not require any revision of the conclusions of the special sciences—this is what Berkeley does say about his doctrine. It would, indeed, be fairly generally admitted that none of the propositions of the special sciences could be deduced from logical theory, nor could any special 'scientific' proposition be advanced in verification or disproof of a logical doctrine. But what Carnap's references to "systems of scientific hypotheses", "perceptive propositions", "empirical consequences" suggest is that that is the sort of verification he demands; indeed, the term 'empirical' is often used in opposition to the logical, to that which is purely general or concerned with the conditions of existence. Yet, even if philosophical theories have no 'scientific', 'empirical' consequences, they have philosophical consequences; in Berkeley's case, for instance, it can be shown that his central position is inconsistent with there being any science at all. What the Principle of Verifiability, as applied to philosophy, in the end amounts to is the rejection of logic because it is inconsistent with 'perceptive verifications', which in turn, as others have pointed out, is the metaphysic of 'pure experience'.

There is, then, no possibility of determining the meaningfulness or meaninglessness of ethical propositions, for example, except by studying ethics—by considering, at any rate, the class of phenomena upon which ethical theorists concentrate. Any theorising is no more than the attempt to establish the meaning of certain terms or propositions. The curious belief that somehow meanings can be for ever fixed and settled before speculation begins runs through all the theories of language which Ogden discusses in his essay. It is easy enough to see how Leibniz or Berkeley, holding to a doctrine of simple and distinct notions or ideas, could imagine that error must be due to the "curtain of words", and that the invention of a philosophic language would free us from confusion. But, recognising that what we think about are complex and changing things, we can understand that words are ambiguous because the things for which they stand are capable of being confused. Of course, we commonly make mistakes about the usages of words; we may not understand to what sort of thing a person applies a certain name; but the disputes most important in the history of philosophy go quite beyond any question of usage, and relate to the characters of the things to which the words are applied. On the whole, it cannot be said that Ogden's essay contributes anything to the study of the thinkers concerned. The material he collects, though interesting, has been by no means neglected; and what little independent discussion he supplies seems to me to ignore most of the problems the subject suggests, and gives the weakest of answers to anti-nominalist critics.

Richards' article has, since its publication here, appeared as a chapter in his book *Coleridge on Imagination.* Of the rest, the two of most interest are, perhaps, Oliver Reiser's *Consciousness as a New Dimension,* and Paul Schilder's *Space, Time and Perception.* There is an account of the progress of the Basic English movement, and, to conclude, a warm and amusing attack on an American competitor to Basic, the *Swenson Word List.*

P. H. PARTRIDGE.

LA MYTHOLOGIE PRIMITIVE—LE MONDE MYTHIQUE DES AUSTRALIENS ET DES PAPOUS. By Lucien Lévy-Bruhl. Librairie Félix Alcan, Paris, 1935 (4e Edition). Pp. xlvii + 335, with 4 plates. Price 60 francs.

Like Professor Lévy-Bruhl's other works, this also is concerned with an examination of evidence relating to the existence of a pre-logical stage in the development of human reason. In his earlier books, however, he depended for his references on old accounts of native peoples written by traders and casual visitors who had had no training in anthropological technique, and his conclusions in consequence were often unacceptable. In this new edition, on the other hand, reference is made to the work of such acknowledged authorities as Professor Malinowski, Professor Elkin and Dr. Fortune: the book therefore is worthy of serious attention.

Perhaps the most interesting theory advanced is that the primitive conception of past time is different from our own. Natives, the author suggests, do not look upon the past as a series of epochs one behind the other leading eventually to the period when the culture heroes were alive: rather they believe that these heroes are outside time and beyond it.

H. I. HOGBIN.

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